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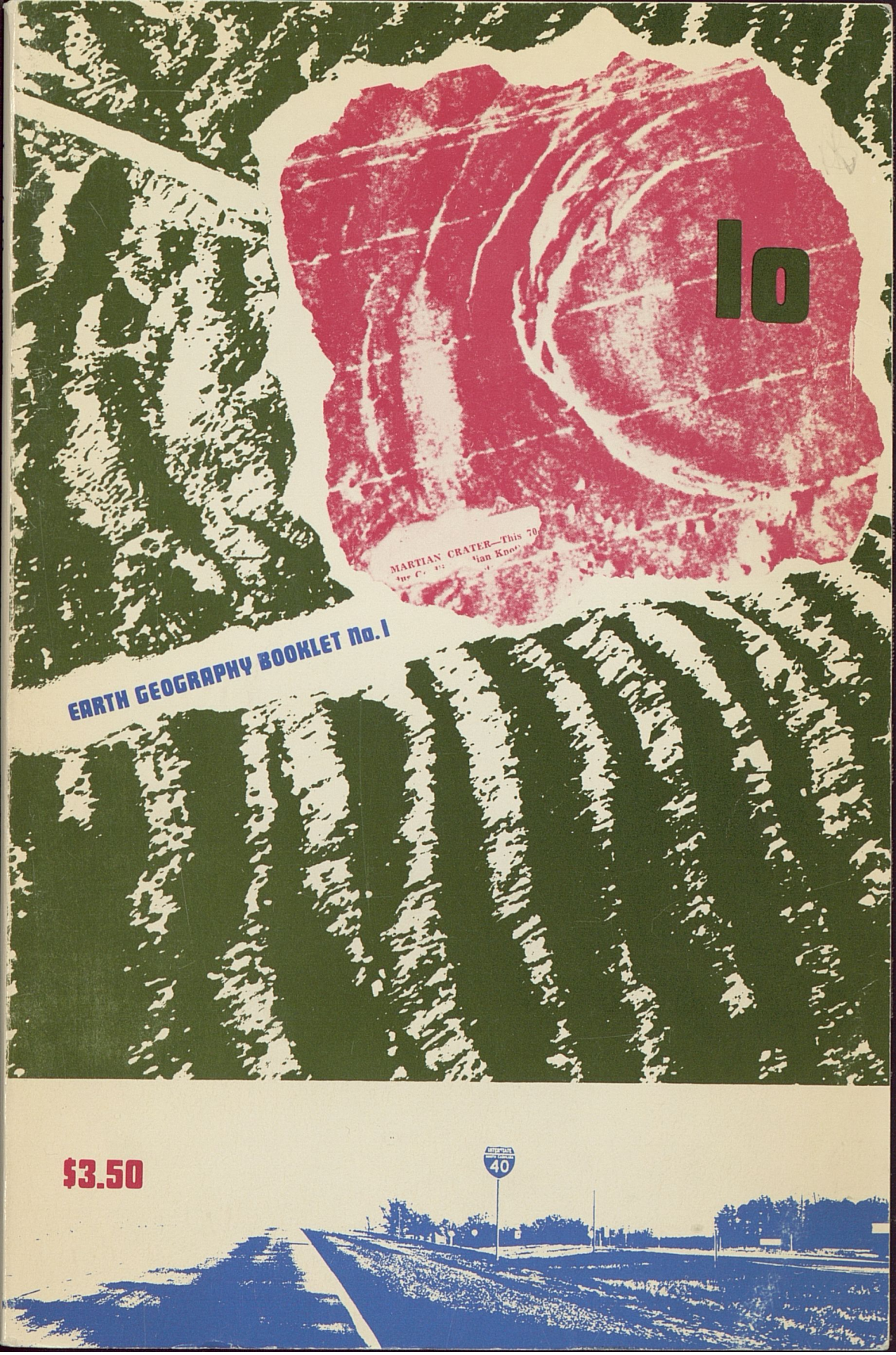

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(*alternate address: use only if no response from above*
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This is Issue #12 in the series of *Io*s going back to 1964. It is the first of the Earth Geography Booklets, and entitled, as such: ECONOMICS, TECHNOLOGY, & CELESTIAL INFLUENCE. The second booklet will be entitled: REGIONS & LOCALES; and the third one: SPACE.

The back issues of *Io* continue to be available. A complete set, thru Issue 11, can be purchased from us for $30.00. A subscription for 4 issues costs $10.00. Following the first three untitled issues, the issues have been: ALCHEMY, DOCTRINE OF SIGNATURES, ETHNOASTRONOMY, OECOLOGY, ONEIROLOGY (DREAMS), MARS, BASEBALL, and CHANGING WOMAN.

A note on pricing of single issues. In general, we would like the issues to be available in bookstores for $3.00, or less. We have had to raise the store price to $3.50 when an issue is excessively long (as the Dreams Issue) or when there is expensive photography and/or color printing associated with it (as with the Baseball Issue and Mars Book). It is also true that prices of printing materials have gone up, and *Io* is now distributed by Book People (2940 Seventh Street, Berkeley 94710), meaning that there is another cut. For this reason, and because of the expense involved in the photography and cover printing, this issue will also be $3.50, though this will not affect its price to subscribers (which remains, in effect, $2.50).

A note on the typing. Once again, the pressure of getting the issue together quickly has necessitated the use of different typewriters and different reduction ratios. Sometimes, even, corrections had to be made within single pieces when a given typewriter was unavailable. This explains the variety of type.

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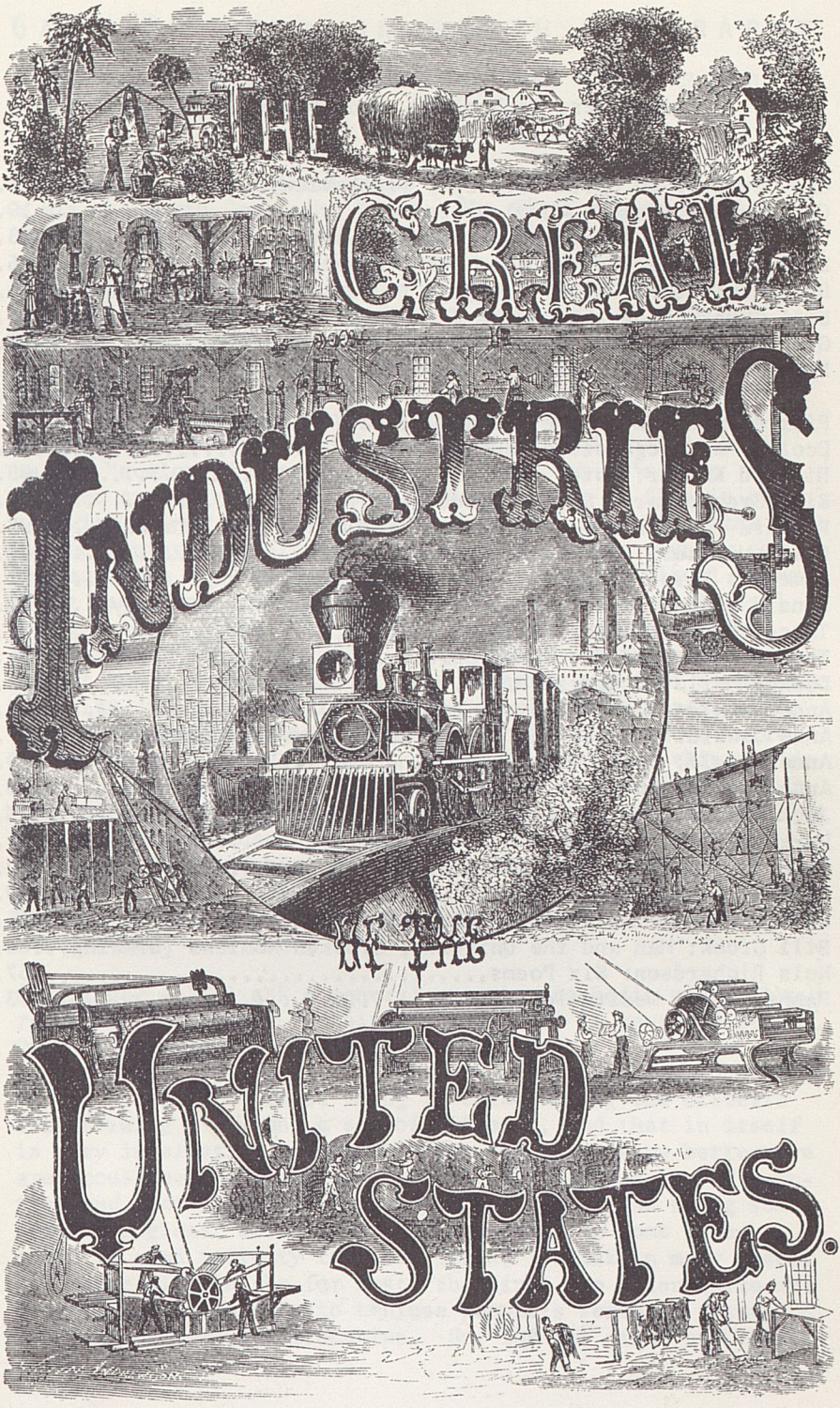

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EARTH GEOGRAPHY BOOKLET #1
Economics, Technology, and Celestial Influence

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GARY SNYDER: ON EARTH GEOGRAPHY

[*Interview conducted by Richard Grossinger with help from David Wilk - - - November 9, 1971*]

Grossinger - This interview may well serve two functions vis a vis the Earth Geography topic. The first has to do with regions, how people conceive their regions, the use they might make out of them.....the whole Earth Geography series, if it's to work, is to be made of people writing about and presenting their regions in interesting ways, as they see them, or see themselves thru a set of local dimensions and peculiarities. The second would be in terms of what you've been calling "the long-range work," that is: the flexibility necessary for reconceiving the entire Earth, or coming to read our information of it as different. This hasn't been called "ecology," simply because ecology, as it's been defined and operated, doesn't seem upto it. It fits in better with things like aesthetics, poetry, imaginative star science, prayer, meditation, though I think you rightly told the audience how the present-day interest in spiritual things, as it was phrased to you, is more an interest in biological things, which haven't at all had their full conscious due. If it's "big world ecology," it is perhaps in the sense Rappaport means when he suggests the bringing together of science with its discursive logic and the humanities, the religions, with their nondiscursive reasoning, to form a kind of world logos (he says "parascience"). This is the other thing: I'd like to get some feedback going between the issues, and your response to the Rappaport essay in the course of this would be interesting because it would pull in the base from the Oecology Issue and keep a dialogue, or multilogue, going.

Snyder - Okay. Well, I'll be fairly passive I guess and let you ask some questions.

Grossinger - I'll ask a general question to begin with. About regions. What sorts of things you've done in your own region. Or thoughts about regionalism in general.

Snyder - Well, the first thing is establishing the criteria for defining a region, a set of criteria, and that in itself is very interesting.....since, even though we know better, we are accustomed to accepting the political boundaries of counties and states, and then national boundaries, as being some kind of regional definition; and although, in some cases, there is some validity to those lines, I think in many cases, and especially in the far West, the lines are often quite arbitrary and serve only to confuse people's sense of natural associations and relationships. So, for the state of Califor-

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nia, which is the only area I'm capable of talking about really right now, what was most useful originally for us was to look at the Kroeber maps in the *Handbook of California Indians*, which showed the distribution of the original Indian culture groups and tribes (culture areas), and then to correlate that with other maps, some of which are in Kroeber's *Cultural and Natural Areas of Native North America*.....and just correlate the overlap between ranges of certain types of flora, between certain types of biomes, and climatological areas, and cultural areas, and get a sense of that region, and then look at more or less physical maps and study the drainages, and get a clearer sense of what drainage terms are and correlate those also. All these exercises toward breaking our minds out of the molds of political boundaries or any kind of habituated or received notions of regional distinctions.

There's a lot of background, of course, to such an interest: like why would people arrive at a point of trying to see things in that way. Without going back over all that, because I think we know that, really, I'll just say there are two things behind it. One is political; the other is ecological. The political side of it is a long-range, a long-term feeling we've all had that political entities are not real. Simply that. A political anarchist position: that the boundaries drawn by national states and so forth don't represent any sort of real entity. But that kind of perception's been around for a long time, and it's been a more or less academic perception, a theoretical perception, whereas what gives reality to this kind of thinking now is the realization, in terms of efficient and elegant associations of natural systems, the sort that men are going to have to, and want to, live in in the long run (if there's going to be a condition of harmonious growth rather than outrageous growth) requires this kind of knowledge: that people have to learn a sense of region, and what is possible within a region, rather than indefinitely assuming that a kind of promiscuous distribution of goods and long-range transportation is always going to be possible..... since the energy resources apparently won't be there, quite likely won't be there. And that brings you back into thinking more in terms of your human scope and your human scale: what can you do in an area that you can ride a horse or walk on, and what are the things that you rely on in that case, what resources do you develop. And that gives you a very strong, concrete sense of how regions and then subregions and subregions work, and makes a study of aboriginal native people's ways of life more than just an academic exercise.

Grossinger - How has that worked in your region?

Snyder - Well, in our region, which is the Nevada County West slope of the Sierra drainage of the Yuba, South Fork, Middle

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Fork, North Fork of the Yuba River, in our region, white settlement was determined almost entirely by the Gold Rush, and so it has no relation to anything which is on the surface; it has relation to that which is under the surface, or was under the surface, and is of almost no value now in making any sense. Other things happened, such as, because of early logging and fire, there was a period of grazing, ranching, that was made possible, which, as it turned out, was a very short-term phase; and the grass succession was rapidly replaced by the manzanita and forest succession again, and so the tendency of that whole area is to go into forest; old farms are abandoned and are turning back into woods. Consequently, nowadays any of us who think about any gardening or farming think about it in very limited terms as something which is possible in special areas but not desirable to the region as a whole (since the region produces a great deal of life without human intereference, enough life to support human beings, in small numbers, in reasonable numbers). All this is part of defining.....California.

Grossinger - What clue does American Indian demography give to the present state of culture in California?

Snyder - The Indian cultures give you a sense of what California probably in some sense - quote - *is*. That is, the way it divides up people's habitats and the things it makes them dependent on still holds, but there have been some profound changes in the state. The greatest single change has been the draining of the Sacramento Valley and the San Joaquin Valley, the draining of the tule swamps. You see, the great central valley of California was originally a vast area of swamp; tule is a type of reed or rush that grew in abundance in the swamps. The state has been profoundly altered, first with the Spanish grazing and ranching, and then later with the deliberate agriculture, the draining of the swamps of the great central valley. The great central valley itself was never a place of much habitation. Indians lived on the margins of it, in the eastern margins and the western margins, in zones between the hills and the valley, the hills and the plains, where they would be able to draw up higher into the hills in the winter and be above the rather chilly tule fogs, and move out into the tule swamps in the summer and other times of year when it was convenient for varieties of wild plants that were edible and out there, and for hunting the tule elk, and for snaring and netting and trapping the millions upon millions of water fowl that pass thru, and also there are large herds of prong-horned antelopes in the central valley. And the grasses of the plains and hills were different from the grasses you see now; they were all perennial bunch grasses.....whereas the grasses now are all European grasses, mostly annuals, all annuals, a lot of cheat grass, which has reduced the quality of

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the range. So all of that great biological richness of these enormous swamps, plains, was drained, and the water fowl were all shot off and so forth, and it's been turned over to tractor agriculture; that's a major change. And the tule elk is virtually extinct: that's the first great impact of man in California, which modern Californians know little of. The draining of the swamps and the destruction of the water fowl flocks all took place in the same period, in the 1850's and '60's, and that was a period of intense market hunting where what-would-now-be-considered game birds were sold in the marketplace, in large numbers, at dirt cheap prices, by people who went out and shot them commercially, with giant shotguns that would kill three hundred at one blast. And that's what Raymond Dasmun has described as, that single period between 1850 and 1865, the greatest single destruction of wildlife for its period of time in the history of the world.....taking place right there in California.

Grossinger - How do you get your information on local soils?

Snyder - What we do with finding out about local soils is go to the local soil conservation bureau, and those fellas come out and spend a couple of days with you, very relaxed, and very helpful, and take a soil augur along and bore profiles of the soil at different points, and tell you what's going on out there, and it's all free.

Grossinger - You were saying something about Sauer and local agriculture.

Snyder - Yes, I was just reading that the other day. Sauer says the Mediterranean is the best model for California agriculture because we have summer drouth and wet winters, which is not typical of the rest of the country. The rest of the country gets rained in the summer; you see, California doesn't; it's a different plant zone; it really is.

Grossinger - You were speaking earlier of that signature with the mushroom and the deer.

Snyder - I was simply saying that with the rains, and the snows in the high country, the higher country, the deer move down, and, as it happened this year, the rains brought the deer down, and brought the deer mushroom out at exactly the same period of time, so that the deer arrived and began to eat the deer mushroom, which was there waiting for them, which is called deer mushroom because deer love it so, and they smell it under the oak duff, and they kick back the oak leaves, and find it and then eat it.

Grossinger - Is the fact of the nation being so large and complex part of the inevitable spur toward regionalism?

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Snyder - I'm not saying that the continent as a whole, or even the planet as a whole, cannot be, in some sense, grasped and understood, and indeed it should be, but for the time, especially in North America, we are extremely deficient in regional knowledge --- that as invaders here, who have never stayed in any one place long enough to develop a sound sense of what the system of any given region is; it is like a prior exercise almost, to have a really strong sense of how things work and to be able to move thru the seasons with fairly accurate knowledge of what's going on within a given region at any given time of year and to know how your own life and food production is related to that. Rather than being limiting, that gives you a lot of insight into understanding the whole thing, the larger systems.

Let me say something on top of that. We had some people stop by last summer who wanted to videotape a whole lot of what some of us and my neighbors were doing, and everyone said they weren't interested in being videotaped; and their response, because their intentions are certainly good,..... their response was: don't you want to participate in the spreading and dissemination of knowledge with other people and serve a communications role; and the natural reaction to that on the part of a number of people, and myself included, was --- at this point there is no use in disseminating knowledge of this order to people who are not in any way equipped to grasp it; and what we would be interested in doing is to share knowledge with the people who have similar knowledge of their own territory, because we'll understand what they have to say and they'll understand what we'll have to say; but to put it out into the mass media, even like intellectual or avant garde mass media, is simply to titillate and to arouse a lot of intellectual notions without giving anyone any grounding in it. Consequently, you could say, roughly, there is a world network of urban centers, all of which are relatively similar, and any urban person can be put down in any other city and he'll know how to find his way around; and that network has extremely swift information and communications systems. There is also a much older network of country, rural, traditional cultures that have been in contact for millenia, that share basic ways of dealing with things, and they too know each other and recognize each other whenever brought into contact; and there is an internationalism possible on that level which is not generally recognized. But what I'm driving at is simply this: from getting more skills where I am I know how much better I could talk to a Tibetan nomad now, and I understand more of what Japanese farmers were doing, and I expect that that kind of depth and potential communicability will go on on a level which really hasn't been seen much.

Grossinger - This leads me to ask you to say something again about the lost technology, the one we've lost in taking on this one.

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Snyder - There's a lost technology, and there's a ghost technology that was never developed that always existed like a ghost somewhere off to the side.....and they are similar; they are both technologies of independence and decentralization, and decentralized energy sources. Aldous Huxley used to talk about that, you know; in one of his novels, *After Many a Summer Dies the Swan*, I think he talks about it. First of all, with our present technology, we tend to forget that there were a number of very workable and, in some cases, downright elegant solutions to our problems, our daily problems, of life on the farm, in the 18th Century, which was kind of like the high point of that, that we've forgotten about, and we tend to exaggerate the problems human beings would have if.....there were no fossil fuels simply because of our ignorance of what the other ways of doing it were, that those methods are there .....like water-wheels, who uses water-wheels anymore to grind flour, and yet it's evident that water-wheels are non-polluting and non-resource-destructive, and very workable. Or an even more interesting example is the Pelton Wheel. The Pelton Wheel was developed by a mining engineer named Pelton who lived in Camptonville, California, only 25 miles from where I am, in a town that only has a population of about 30, as a maximal efficiency water-wheel. He specifically designed the shape of the little cups on the wheel, put the wheel on bearings, balanced it in a very perfect way, and instead of running off of a flow of water, it runs off of a jet, so that you have a long head of water, you have to have maybe a 200 foot head, and then a very small jet, that is, it's nozzled right down, and the jet hits the cups at right angles, and the cups spin on a low-friction bearing, and turn a shaft.....and a Pelton Wheel can be made in any size. Now the Pelton Wheel served in the northern mines, the Northern Mines District of California, for a number of years, and served remarkably well, only to be replaced ultimately by electricity.....so that the Pelton Wheel technology has been forgotten about, but they ran a huge deep-shaft gold mine called the North Star Gold Mine.....it ran for several decades entirely powered by Pelton Wheels operating air pumps compressed air; the Pelton Wheels compressed air and it ran all the equipment down in the mines thousands of feet deep, compressed air, no electricity whatsoever. I've heard about this; I haven't seen it, but I've heard about it: a fellow in the next county north, Plumas County, who has a Pelton Wheel about eleven inches in diameter running off a jet of water which is only an eighth of an inch in diameter, with which he powers his whole house; it makes enough electricity to run a house, just a little water wheel this big.....

Wilk - What does he use for a generator?

Snyder - He runs an electric generator off of that wheel..... and like an eighth inch jet of water, which means: one small creek, with enough head on it, which you do with plastic pipe,

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PVC pipe. That's what I mean by a ghost technology, a technology that is part of the industrial revolution but is off to the side a little bit and never gets quite developed.....because everything in the technology which did get attention was in the direction of centralization and proliferation of products and so forth, and the other angles, that would, say, liberate men to live in a decentralized way, just like all the ideas that the Department of Agriculture was circulating in '30's in the direction of self-sufficient homesteads, under Roosevelt, when there was a period that the government and Department of Agriculture actually thought that self-sufficient homesteads were the coming thing. All that information is set aside somewhere and forgotten about; that's the ghost technology. The combination of that alternative decentralist self-sufficiency technology plus the technology that was forgotten, that is just like around the corner, is a great potential sensible living capacity for us in some other time.....in some future time.....even right now if you want to use it. That whole Pelton Wheel's fascinating to me; I'm going to develop a Pelton Wheel myself.....or like what Allen Ginsberg's got on his farm, a hydraulic ram pump, a nonelectric, self-propelling water-pump system, that will pump any amount of water if you just have time; it will fill up a huge water-tank. I'll send you a picture of a Pelton Wheel; they're very beautiful things. They have them on display and so forth in little parks around the county.....

Grossinger - Like they was history.

Snyder - Yeah, like they was history.

Grossinger - What would you say to someone who didn't want to do farmwork, who, in fact, wanted to be liberated from it because it's backbreaking.

Snyder - It's only backbreaking if you're trying to maintain a standard of living that's out of proportion to who and where you are and is dictated by the tastes of the city rather than the tastes of the country, which is what Nineteenth Century American farm tastes were dictated by: the Sears-Roebuck Catalogue; look at the 1908 Sears-Roebuck Catalogue.....and that whole trend of the Nineteenth Century was for everyone to live as though they were in the capital.....like if you were out in India as a British civil servant, nevertheless you dress for dinner and eat in the English fashion, which I guess would be Five P.M., whether you're in Madras or Afghanistan..... that whole Nineteenth Century notion, which was an interesting kind of cosmopolitanism, forced people into outdoing themselves at farming, and that of course was combined with the fact that by the late Nineteenth Century agriculture was almost all market agriculture anyway, and they were growing single-crop, or certainly limited crop, cash crop kinds of things, had got-

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ten away from self-sufficiency and diversification and, in many cases, had not even been in the region they were in, like, say Nebraska, or the wheat farms of Eastern Washington, they hadn't been there long enough, one generation only, to develop the sophistications that would have made life easier for them; it takes perhaps a long time to get to know how to live in a region gently and easily and with a maximal annual efficiency, to know when to do what thru the passage of the year, when to make the most out of every opportunity in the passage of the year, and also to know when to rest during the process of the year, and that backbreaking farm work of our Anglo-forebears out on the Plains and in the homesteadding countries of the Midwest and so forth was because they were both ignorant and greedy and competitive and forced by a capitalist system from behind. They were so forced that in most cases they were trying to pay off debts. They went into hock to do their farm thing. They were into hock for tools and for seed. And a lot of them never got out of hock. There's a whole capitalist and mercantile thing which goes with the frontier that people don't generally know about. The alternative thing to look at, if you're curious, are the Spanish-American farms, farming communities, that developed in the Upper Rio Grande Valley and the tributaries of the Rio Grande Valley, that had been there for almost 300 years, that developed a what-you-might-call Western-derived, Spanish-derived, Mexican-derived agriculture system in North America on a stable basis, and although they can certainly said to be poor, their backs were not broken and they were never alienated or in a position of having no culture.....where they had for a long period a strong stable Spanish-American Catholic culture, which, for a good period, was in relative harmony with the surrounding Indian cultures too. Then the American Indians certainly are a case of, the Pueblos are a case of an agricultural stability that allows plenty of time and does not break the back. I mean they can work very hard, but they also can have festivals two weeks long.

Grossinger - What would you say to people who say that they're isolated?

Snyder - In relation to what is always the question. Nobody is really ever isolated. The question seems to be whether or not they're able in whatever, say lonely region they think they're in, to have a cooperative or semi-cooperative community function.....or to what degree sharing takes place with neighbors, and in that process, to what degree that circle of neighbors is able to establish a sense of its own center, its own knowledge, its own magic.....or it remains dependent on: news from outside, and thus feels continually in a cultural backwater. This is one of the strangest problems of this century.....is that business of whether or not you can feel you're at the center or whether or not you feel you're in a backwater. It's paradoxical

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that Portland, Maine, feels like it's a backwater, but maybe some hippie commune deeper in the hills doesn't feel like it's a backwater. I saw something like that happen on Suwa-no-se Island in southern Japan just as a real case in point: a Japanese island subculture, the Amami Islands subculture, having one branch up on this tiny tiny volcanic island.....the people on the island, 40 people at most, living almost totally self-sufficiently by fishing and sweet potato growing, with their own songs, their own way of brewing alcohol, their own kinds of musical instruments, and customs like tattooing the backs of the hands on the women, and so forth, and their own designs and fabrics, feeling completely at ease in their world and completely centered in their world, and then the expansion, post World War II, of the Japanese city culture, radio and then television coming in, and the television comes in because the national television system of Japan, a national monopoly, gives the island a televsion set, like installs it for them, so they can watch it, and it's installed in one of the little buildings off of the school building, and the whole island for a while goes down in the evenings to watch the television, except the reception is poor; the combination of these things is within, say, ten years, to shift their perception of themselves from what I've just described to a perception of themselves as a miserable backwater people, out of the stream of things, and what they do is start wearing badly-fitting and poorly-conceived imitations of what the people on the mainland wear, so they just look like they got no style, you know, and thinking that Tokyo must be the most wonderful place in the world, and losing all of the style that they had, and this is what's happening all over the world, and we know all about it, but it's that profound little switch that takes place there between thinking, we have a validity of our own, we are authentic, we're real people, to that other thing of thinking, we're third class people, and there's such a subtle switch in there where that happens, wherever that line is.....but it's reversing that in some ways that we're interested in; it's in putting the center of authenticity back within independent local communities, and removing them from a dependence on some kind of centrally-dictated model.....which I think can be done, without creating a climate of simple provincialism, a climate which is not even interested in what goes on in the world at large. It seems to me that there's no reason why you can't have an intelligent and formed way of seeing a larger world without losing your own sense of local vitality.

Wilk - What happened with the small Japanese island happens in the ghetto.

Snyder - It happens everywhere; it happens with every American Indian group; it happens with ghettoes; it happens with small towns; it happens with people in New Guinea, and Port Moresby and so forth. It's what the impact of the modern world has

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done to the rest of the world; it's given everybody else an inferiority complex, and bad taste, theoretically, since they can't match the central model, quite; and something like that's been going on a long time. In the Roman Empire it talks about the backwardness of the people of the provinces as against the people who are true Romans; and so I see that as going hand-in-hand with the development of the state, the city, and imperialism, and it's certainly one of the most insidious and effective means of political imperialism, to demoralize and enslave the people it's out to get, because that's what it amounts to, an enslavement.

Wilk - I wonder why people are prone to that, why it's so easy for them to have their equilibrium disturbed like that.

Snyder - Well, that's another thing: some people are less disturbable than others; some have more resistance than others, and that's a very interesting anthropological question, because some of those who have the most resistance are not necessarily the ones who have the greatest surface strength. There's a whole study there in what gives a culture resilience and inner strength, and what makes a country collapse: why did Mexico collapse in front of the Spaniards in ten years?; how did that happen?.....whereas in Sonora how come the Yaqui have still not collapsed?; in essence they still resist Mexico. India is very interesting because you have an area there where for two, for three thousand years, civilization, that is to say, class structure, writing systems, money economy, markets, various kinds of governments, have dominated the plains, iron technology and so forth, iron tools, have dominated the plains for three thousand years, and yet a dozen miles away, up into the hills and thru the woods, there will be cultures that have been aware of that whole civilized thing and have traded with it for these three thousand years, but have essentially kept intact, haven't really been disturbed by its presence. And yet those people on the plains represent an earlier assimilation of a number of other primitive cultures.....but the hill people hold on.

Grossinger - I'd like to switch to the second topic and ask you some questions about the limits of technology, which I'd like to put in the context of a quote from this book. This is part of a discussion of the conceivable extents of technological civilizations in *Intelligent Life in the Universe*; the hyperbole of all this can direct us away from some more localized questions and problems and focus us on something like the cosmic scale that is always implied:

"Let us now return to the subject of the material resources available to a developing society. After reaching a high state of technical development, it would seem very natural that a

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civilization would strive to make use of energy and materials external to the planet of origin, but within the limits of the local solar system. Our star radiates 4×10^{33} ergs of energy each second, and the masses of the Jovian planets constitute the major potential source of material. Jupiter alone has a mass of 2×10^{30} grams. It has been estimated that about 10^{44} ergs of energy would be required to completely vaporize Jupiter. This is roughly equal to the total radiation output of the Sun over a period of 800 years.

According to Dyson, the mass of Jupiter could be used to construct an immense shell which would surround the Sun, and have a radius of about 1 A.U. (150 million kilometers). How thick would the shell of a Dyson sphere be? The volume of such a sphere would be $4\pi r^2 S$, where r is the radius of the sphere, 1 density, p, and the mass available is approximately the mass of Jupiter. Thus, $4\pi r^2 pS = 2 \times 10^{30}$ grams. Thus, we find that $pS \simeq 200$ gm cm^{-2} of surface area would be sufficient to make the inner shell habitable. We recall that the mass of the atmosphere above each square centimeter of the Earth's surface is close to 1000 gm. If the over-all density of the shell were 1 gm cm^{-3} or slightly less, the thickness of the shell, S, would be a few meters. Man today, for all practical purposes, is a two-dimensional being, since he utilizes only the surface of the Earth. It would be entirely possible for mankind in the future --- say, in 2500 to 3000 years --- to created an artificial biosphere on the inner surface of a Dyson sphere. After man has accomplished this magnificent achievement, he would be able to use the total energy output of the Sun. Every photon emitted by the Sun would be absorbed by the Dyson sphere, and could be utilized productively. The inside surface area of the Dyson sphere would be approximately 1 billion times greater than the surface area of the Earth."

Snyder - The burden of the argument remains with the man who presents the argument, as to why this is necessary, or what it serves. He only once uses the word "the development".....of our society [note: just before the section quoted]; he doesn't give what his assumptions are about the development that would make this kind of thing serve man's best interests. And so it remains unanswered, perhaps because he's naive, or perhaps he doesn't want to talk about it, and this is really the point where you must come up front and say *what is* in man's best interests: what amounts to actual growth, actual development, actual expansion of the human possibility.

Grossinger - We operate in the face of a certain blindness. Not only are the ends and means confused, but the relation of any sort of extravagant statement to either is uncertain.

Snyder - Well, of course, there's blindness, but at least one can try to express, as far as he thinks of these things at all,

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what he has in mind. Otherwise such an argument is useless. Because all he's saying is that we can have more people, and that we can use the energy of the sun efficiently. That's no more than.....qualitatively that's no different than saying: we should populate all of North America and have lots of electric generators. And we *know* that that isn't satisfactory to us at this point, so why should populating the entire inside of a sphere and getting all of the energy of the sun be of any more interest, *unless* there can be another dimension that's brought out in that.

Grossinger - I suppose he might claim that that could be possible.

Snyder - .....which could be possible without doing that too.

Grossinger - My sense in giving that to you was: as long as we're going to talk about this, let's use extremes. That's the biggest suggestion I know of.

Snyder - Yes, that's a big suggestion, but psychologically it's no larger than the suggestion of doing the whole trip of industrial U.S.A. would be to a Natchez Indian. [LONG PAUSE]. In essence, you know, we already have done what he describes there. And what he does is just explode it larger.

Grossinger - I think the idea came from a kind of planetary think tank.

Snyder - Well, those guys are paid to sit around and smoke expensive dope and think things up.

Grossinger - To ask you to say something about the "Sanctity and Adaptation" essay of Rappaport is a little unnecessary since, in many senses, you simply agree, or say the same thing in different terms. Yet, is there anything you could, or would want to, put down after having just read it?

Snyder - Well, the key thing that would seem to hold up for the whole essay is right at the back, in fact the final sentence [see Io/7, Oecology Issue, Page 68]: "In the arena of action itself I believe that it <u>is</u> the task of those disciplines which <u>are</u> concerned with the necessary interdependence of living things to provide <u>viable</u> propositions to which men can accord <u>sacred</u> status." [four words underlined denote Snyder's emphases in reading the sentence]. And I think that's a really beautiful proposition to put in front of us, and very pregnant, because it puts it in the hands of the biological sciences, biochemistry, biophysics, as well as in the hands of, say, poets and priests, to really look at what they're doing and to come out up front

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with the holy truths of it, which a number of people have intimations of, but we haven't been able to make those statements so clearly so far.

Grossinger - How does it speak to a priest?

Snyder - Well, it throws it back on a priest in a very nice way, because he has to ask himself: gee, does my religion deal with the interdependence of things? And if he can't see that in his tradition, maybe his tradition is offbase. If it doesn't show *that*, then his religion has not, at least in these terms, served mankind as well as it should and cannot, perhaps, serve mankind so well in the future. And I shouldn't just say mankind; I should say: serve all sentient beings. And so in a sense you can say it's limiting if it does not have a boddhisatva function for all sentient beings. But that very function is not out of harmony with the concept of the void.....because those two things really go hand in hand, and to leap over what would be a lot of rhetoric in between, I'll say that: to serve mankind's interests well and to make the greatest possible development of the creative potential available does not require either numbers of human beings or a complex society. That something with the sophistication and the richness of the traditional transmission of knowledge in Rinzai Zen.....in a tradition such as that there is such richness, such subtlety, such continual surprise and excitement.....it's so fundamentally grounded on the actual facts of existence and at the same time has all of the suggestions of other realms, other possibilities.....it keeps bringing them back, over and over again, to the center. The exploration of consciousness itself and the unfolding recognition of the same principles which are at work in our own minds as being the exact principles that are operating around us is the most beautiful of possible human experiences, at least for some time to come yet, and something of that order is what is --- quote --- what the development of human society should serve.....because, among other things, that teaches you that you're not alone, or that you cannot act simply for yourself.....that teaches you that you are in an interdependent condition with other beings, and it teaches you the sanctity of life, and also how to take life; it solves, not exactly solves, but makes meaningful and beautiful the primary paradoxes that human beings have to live with, like: the food of Eskimos is souls.....how to deal with that, how to make that into real poetry.....and so I say my experience has been within the Zen tradition.

Grossinger - It's those paradoxes that Lévi-Strauss calls sufficient motivation, for myth, society, and so on. There's no need to seek out superior causal elements; they're it.

Snyder - That's right, if you can see that..... So I invoke

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Rinzai Zen because that's been my experience; the Hopis will invoke their tradition; Tibetans will invoke their tradition; other traditional people will invoke their traditions, insofar as they have the courage of those traditions left. But the sum of those traditions, which is the sum of a body of wisdom and a body of lore, which would explore consciousness and would explore nature from within, rather than from without, that would assert, ultimately, as the American Indians, as the Pueblo assert, that we are in a transition phase right now: between having lost our capacity to communicate indirectly, intuitively, and to understand the life force, and the return to that condition, and we are doing hard practice, hard yoga on Earth for these thousands of years because of some errors we made. But our hard yoga, our hard practice, will win us back that skill, that capacity, that direct knowledge of the forces and energies of the universe. Those cannot be won by any matter of scientific inquiry or tools; those can only be won by the most complex and sophisticated tool there is, the mind.

Grossinger - And that attention to our own state, and its circularities of cause and effect, its paradoxes and joys, and the sentient orders that surround and interpenetrate us (not as parapsychic others but in the natural order of things) serves the double purpose of: engaging people in a non-purposeful exploration of their condition (at least in the sense of Rappaport's essay) and engaging them, and their planetary time and energies, in activities that are non-disruptive and do not dominate and degrade ecosystems. That's aesthetics, and what Rappaport, I think, means by the non-discursive, you might say a koan on our being, more powerful than the limiting terms of materialistic (alone) ecology. And that <u>is</u> the circular structure of the universe he talks about.

Snyder - Also, that enlightment or transcendence of the circular structure of the universe is only possible from knowing it, the position of knowing it. See, you could argue in a poetic way that a people like the Bushmen or the Australian Aborigine is a people that did what Rappaport said no people would do, and that is people who decided to do less rather than more, or to translate their achievements onto another plane.

Grossinger - Like good oaks.

Snyder - You could speculate that the Australian Aborigines are people who decided to keep things simple so they could devote themselves to other interests, like discussing kinship terminology [said with a laugh].

Grossinger - Some anthropologists I know might give you an argument, but then their discussion of kinship terminology keeps them out of trouble too.

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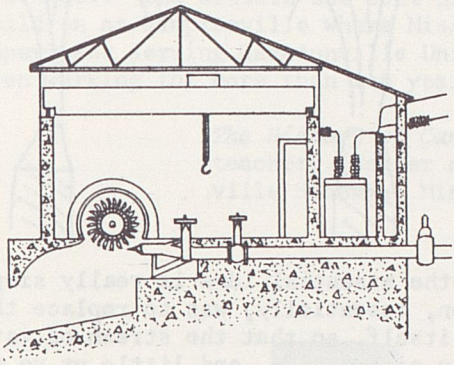
GARY SNYDER: *Pelton Wheel Notes*

I

"The Pelton Wheel -- possibly the smallest of all prime movers in proportion to its power output -- was the invention of Allen Pelton, a California gold miner. In 1870 he happened to notice that when a high-pressure jet of water directed against the flat boards of a waterwheel slipped out of line so that the jet impinged obliquely on the paddles, the wheel increased in speed. Pelton realized that such a wheel could be made more efficient with specially shaped buckets instead of the traditional paddles, and he went on to develop the line." -- *Encyclopedia Americana* 15.327.



single nozzle Pelton turbine

II

"Camptonville's most famous citizen was Lester Allen Pelton, who invented a new type cup for water wheels. His invention revolutionized the use of water-power, led directly to the development of the hydro-electric turbine, in which Pelton cups are still used today.

Lester Allen Pelton was born in Vermilion, Ohio, in 1829, eighteen years before another inventor -- Thomas A. Edison, was born only twenty miles away. When he was 19 years old, Pelton decided to go to California, and walked the entire distance, according to research. He arrived in Camptonville some time between in 1859 or 1850 [sic] and made his home here for many years thereafter.

While boarding with the family of Margaret Groves, ancestor of William Groves, presently of Camptonville...Pelton became increasingly concerned with the problem of harnessing water more efficiently.

Water had been used for many centuries to make power: to turn grist mills, operate textile and saw mills. But the machine was cumbersome, and much of the power was lost, even when manmade equipment began to be used in the nineteenth century. One of the

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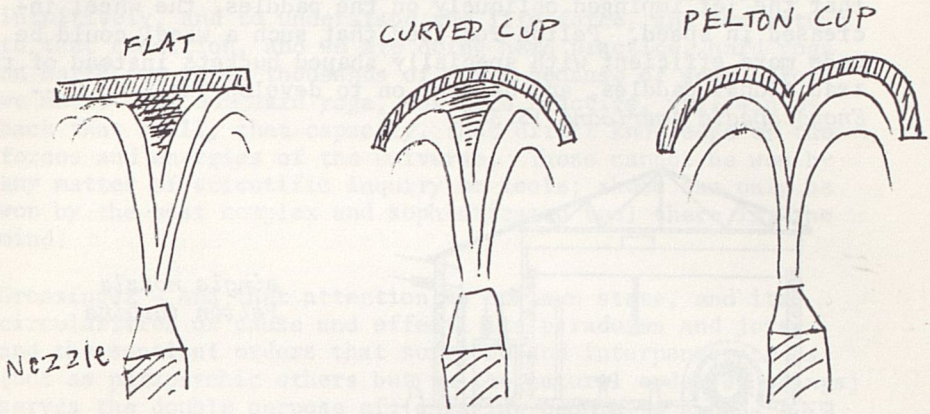
main causes of efficiency-loss was due to "carry". When a stream of water was directed against a flat surface -- as in old grist mills -- the stream divided, the water flowing to each side, but leaving a quantity of water trapped in the "vee" between. This portion of the water was literally "carried" along with the wheel. To a lesser degree, this problem still remained with the use of a curved cup. In the two diagrams at left and center, the horizontally-shaded portions are the trapped water that is "carried":



Like many great inventions, the essential idea is really simple. In this case, Pelton's notion, essentially, was to replace the trapped water by the bucket itself, so that the stream of water was more smoothly directed to either side, and little or no water was 'carried.' Pelton experimented with his landlady's sewing machine, rigging up a wheel with Pelton Cups to power the machine ...possibly the first power-operated sewing machine in America. The principle he had discovered in 1878 was patented by him in 1880, after G.G. Allen, a foundry operator at Miners Foundry, in Nevada City, had helped him with the perfection of his water wheel. In a contest sponsored by the Maryland Mining Company of Grass Valley, Pelton's new wheel won out over all other types of of power machinery, and soon replaced coal-fired steam boilers as a source of power.

In tests sponsored by and conducted at the University of California, it was determined that a flat cup on a water wheel had a maximum efficiency of 40.4%, a curved cup had a 65.5% maximum efficiency, and the Pelton cup had 80.5%. These early tests were made with cups that did not fully conform to Pelton's specifications, and the maximum efficiency has since been determined at better than 90%.

The Nevada Foundry Company began casting Pelton cups, but the demand became so great that the company could not supply it, and the Pelton company, in San Francisco, was formed. Pelton sold his rights and his patents to this company, and remained as a consusltant with the firm, which still manufactures equipment

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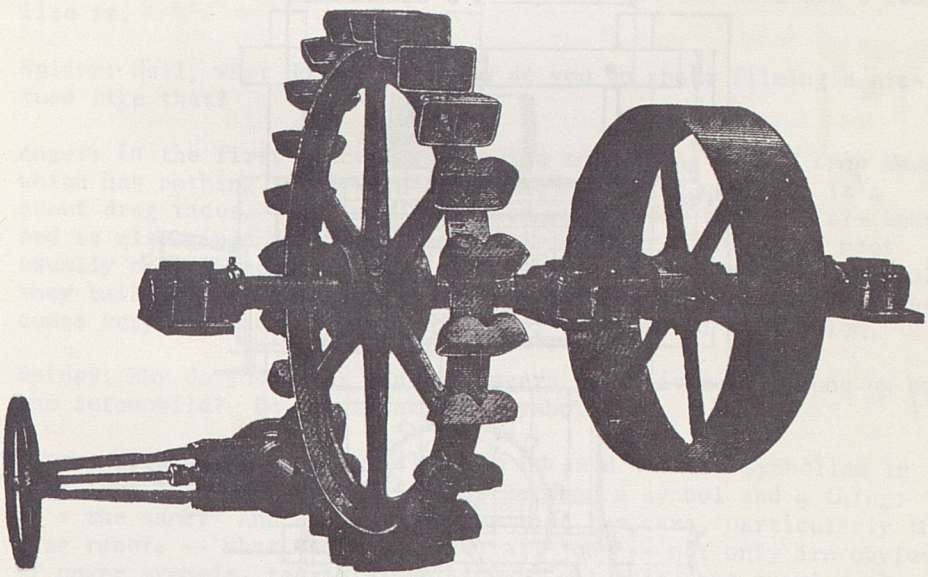
used in hydro-electric power plants across the nation.

Pelton also served as a consultant in hydropower at the University of California. He lived out the later years of his life, successful and famous, in Oakland, California, where he died in 1908, after living almost 80 years.

A part of the Pelton-powered sewing machine is still in possession of the Groves family, and one of the original Pelton Wheels is kept in the Masonic Lodge in Camptonville. In 1929 the Masonic Lodge erected a monument to Pelton at the foot of Maine Street, which, today, reminds all passers-by of Camptonville's most famous historic citizen.

note: Our deep appreciation to Miss Yolanda Bergamini, presently of the Tulare County Department of Education, who has made a lifelong project out of researching and publicizing Pelton and his wheel. One article she sent us was written by third grade children at Camptonville where Miss Bergamini was a general supervisor serving Camptonville Union School. She has also been working for more than ten years on a biography of Pelton."

The History of Camptonville by the children and teachers (Walter and Rachel Bachrach) Camptonville School. Mimeo, 1966. pp. 71-73.



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GS: "Len, what do you know about Pelton Wheels?"

Len Holbrook: "Well, what do you want to know? I don't know much about them. There's one right up there next to the old foundry. You've seen it? There used to be a blacksmith shop down here [Nevada City] the whole shop ran on one Pelton Wheel. All the equipment. Had belts and wheels all over the place. The wheel he had was only about 18" in diameter. There's no limit to how fast those things can go. You could watch one making electricity -- turns so fast you can't see it -- can't take your eyes off it. Pelton lived over in Camtonville. They say he was trying to help his landlady run her sewing machine -- she was an invalid or something, couldn't work the treadle. He made a little waterwheel with beer cans -- yep, that's what it was. Didn't work too well. Then he got the idea for those double-buckets. Some folks say he got the idea from looking where a woman had been sitting in the sand. Ha. Anyhow, he fixed it up, and it sure worked, ran the devil out of that sewing machine and there was water all over the yard. So they made up some bigger ones -- cast them right up here in the foundry. Pretty soon all the mines were using them. Pelton moved his operation down to Oakland. They sent them to mines all over the world."

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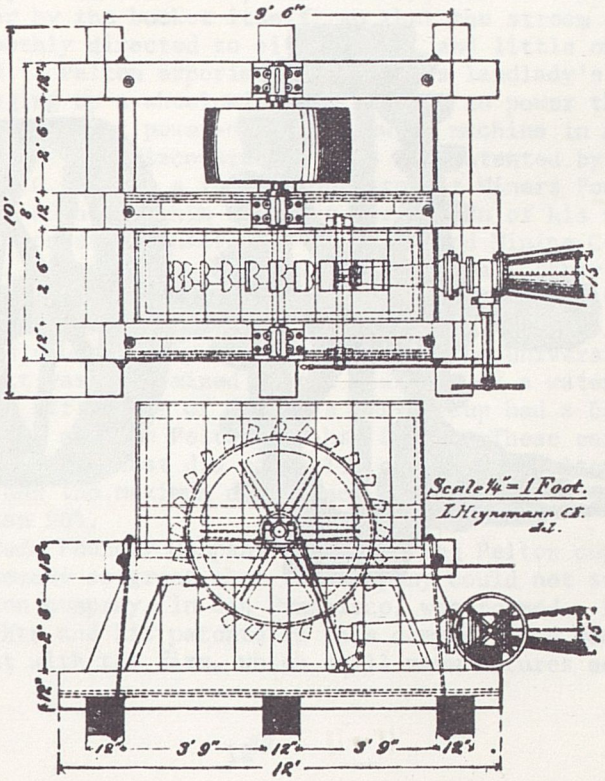

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KENNETH ANGER: SPIDER INTERVIEW

Spider: Talk about your next film, *Kustom*. What's it about? When will it be done?

Anger: Well, right now it's hung up because I've run out of money. When I got the Ford Foundation grant, I was completely breadless, and I conscientiously paid off lab bills and things like that. So by the time I'd taken care of my debts there was a piece missing of the $10,000, and then I got a used station wagon, and some extra equipment I needed. And so a friend and I set off across the country from here to New York to film. The material I'm filming is teenagers in relationship to machines. And one of the machines that across the country they're hung up on in a popular sense, I mean like aside from the transistor, is the car. And so my film is ostensibly about teenagers and drag racers and kustom cars.

Spider: Then that's what the name is for.

Anger: Actually, the complete title is "KKK," which stands for Kustom Kar Kommandos. You can publish that as the real title because that *is* the real title. Kustom is spelled with a "k" because that's the way teenagers spell it to show that it's a teenage word and adults keep out. They've invented their own little things like that, and they've invented a lot of other things too. The Kommandos being spelled with a "k" turns out to be German, but the kids don't realize it.

Spider: Well, what do you do? How do you go about filming a picture like that?

Anger: In the first place, I subscribe to a thing called *Drag News*, which has nothing to do with Finocchio's or drag queens. It's about drag races. It gives scheduled events for the next six months, and it also gives the addresses of various car clubs which meet usually once a week. I've gone to plenty of their meetings and all they talk about are motors and cars. It's just incredible. It becomes very abstract, like some sort of theological discussion.

Spider: Why do you think that teenagers are universally hung up on the automobile? Do you think it's symbolic?

Anger: Well, I suppose my films can be said to have symbolism in them, but I don't see a difference between a symbol and a thing: it's the same. And so, you can say that the cars, particularly the drag racers -- what they call the rail jobs -- not only are obviously power symbols, terribly phallic and all this, but they're also an involvement in a controlled ordeal, in a controlled death-tempting ritual. The kids I'm interested in are the ones who create the cars themselves, not the ones who have the money to hire one of these super-duper kustomizers to make their dreamboat project.

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Spider: What would you say to these kids when you wanted to do some filming?

Anger: Well, I say the same thing that I said with the motorcycle group in *Scorpio Rising*, which is, "I'm making a film," as I said in Scorpio, "about bikes," or I say "about kustom cars." And the only similarity of the two groups is that they're terribly touched by anyone that shows any interest in the thing they dig. I've had to do quite a bit of homework, memorizing things that are really quite foreign to me, so that I could talk on their level enough to be accepted.

Spider: Why are there so many prints of your films? We have seen at least three different *Scorpios* and copies of *Fireworks* with and without color.

Anger: Actually, you've only seen two different versions of *Scorpio*. One is what I call the first state, which I had to finish for a festival when I didn't have enough money to do a mixed track. A year later with some of the Ford money I did make a mixed track with sound effects blended with the music, and re-cut it slightly at that time. It's only two states, and I don't think there'll be a third. But I don't think there is anything wrong with the idea of maybe making a few more changes. Someone like Griffith (with *Intolerance*) never had two prints that were the same. Every print he'd be juxtaposing and re-cutting it. Eventually, because I am interested in new projects, I will abandon it. It's easier for a musician or a writer. He can revise just by crossing out or writing in between the lines, but the thing that makes it difficult to revise a film is that it is so fucking expensive. Every print of *Scorpio* cost two hundred dollars. Incidentally, I've withdrawn the earlier version. I only had about three prints, and they are all worn out. So there is only one finished version that is left. And in the case of *Fireworks* there is only one version but there is one print which I hand-tinted just for the hell of it. It was an old worn print and I needed something to do to keep me from flipping, once, because I was so hung up on nothing working out. The print was there, and I had some dye and I began a counter-madness which was to hand-color a black and white film, frame by frame.

Spider: We've been curious about the rock 'n roll songs in *Scorpio*. Why did you decide on a rock 'n roll score?

Anger: Well, I always knew that I wanted a popular music score. Actually, some of the songs are ballads; some are different things. Rock 'n roll is a sort of generic thing you can fit them all under. What *Scorpio* represents is me cluing in to popular American culture after having been away for eight years, because I had been living in France for that long. When I came back, I spent the first part of the summer of 1962 at Coney Island on the beach under the boardwalk. The kids had their little transistors, and had them on.

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It's one of the things that I call a magical happening, the way it worked out, because every single song that I used in *Scorpio* came out at the time that I made the film. For instance, "Blue Velvet", which I use for the "dressing adagio" in *Scorpio*. I was in the final week, where I had to get the track re-recorded and I wanted something slower for this part. Bang, there it was out just on time. And it was just like it was made for the picture, or the picture was made for it--a perfect marriage, because it has the blue of the blue jeans. The whole three minute sequence was just made for it.

Spider: What are European film-makers doing right now?

Anger: Right now Europe is having a very bad time film-wise. The worst is Italy. In fact, the whole country is very fucked up. They don't know what they want any more. Something has to push out the Catholic Church that just sits on the country like a big, fat toad. It really is a weight, there is nothing like it--quite--in this country. I had a book which came out in Italian, and Cardinal Ottiavani in Milan saw to it that this book was banned throughout Italy. One man!

And in France, the New Wave has sort of washed itself out. The first enthusiasms of the young kids, whom I knew (I knew Truffaut when he was just sweeping out the office of Cahiers du Cinema) is gone, but I'm still looking forward to some of them producing great things. By the way, there's a big difference between, say, the American group and the French because the French are exceedingly clever in finding quite a bit of capital. Mostly it is putting the squeeze on the old man. And I'd hate to tell you how many New Wave films depended on marrying the producer's daughter! Truffaut was one.

Spider: What about America?

Anger: I think Hollywood should be dismantled. In other words, no more films should be made there. The name should be changed. For one thing, the air has become so poisoned that there's no clear sunlight. Like Chaplin said, when he first went there, "there was sparkling weather." Now the whole valley is just under this yellow shroud. There's a lot of things I regret not being made in Hollywood anymore that they used to do well. One of the things which I adored and I miss most are serials. I have my favorite serials which I've seen over and over: *Flash Gordon, Daredevils of the Red Circle, Chandu.* Luckily, in Europe they have copies of the American serials, and I got to see them again over there. That, and the kind of little B film that they used to make at Warner's and Columbia. There were good things: the idea of having a movie studio is terrific; it was a magic factory. But what did they do with it? Aside from a few musicals that are really very far out, they just didn't do much. Hollywood

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has had it as far as I'm concerned.

Did you see the Beatles' film? I liked it. It was quite extraordinary. In a sense I--if it were possible--I'd like to work in a more popular movie medium. I would like to because the things that are supposedly made for the teenagers are a pile of shit; they're literally no good. And the kids know it. Yet they have nothing else, so they take this. But they know that they are being taken. And I think I could make a good teenage film, that would still be for them, and that wouldn't get the parents upset about their kiddies seeing it. Maybe I'm fooling myself, but I think I could get away with it. For instance, I don't think there are any good horror films being made nowadays; they have such contempt for the audiences. They are sold on the title or something like that. The horror film is a great form: it's a kind of nightmare wonderland. It is the equivalent of the fairy story, because most of the fairy stories are horror tales.

Spider: What about Stanley Kubrick?

Anger: Well, *Strangelove* is pretty good. But I very much regret the unnecessary complete sacrifice of Lolita. Even if Nabokov agreed on the idea, it doesn't make it right. Upping Lolita's age just tosses the whole idea away. So just forget it. But that's why Kubrick can work in the industry, because he does make those adjustments which I couldn't make.

Spider: What do you think is the most important thing about the film as art?

Anger: I like the idea that an experience can be put in a can and somebody can recreate it. My films are being shown tonight in New York for the first time since the censorship law fell. I can't go myself, but I put them in a can and sent them. It's strange because what I do in my films is very much wrapped up in me. I really dig the idea of audiences. I dig people seeing my films. But when I work on a film I don't think I could ever worry about whether they will like it or understand it. When I get involved in creation that just disappears. It's only afterwards that I feel it. When I really get into that creative thing of making a movie, it's just for me, and the camera, and whatever else happens to be there.

Spider: Why is rock 'n roll important to you?

Anger: I find it a good way to read young America's mind.

Spider: Well, what do you see going on in young America's mind?

Anger: Well, you can't do like the Christian Crusaders do,

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which is to be hung up on one idea, so all they see is *their* idea. Like they're hung up on Anti-Communism, so anything they don't like *has* to be communist. Otherwise it would destroy their whole structure.

Spider: Speaking of the Christian Anti-Communist Crusade, what did you think of Billie James Hargis's contention that the Beatles are a communist front-a menace to American youth?

Anger: Bullshit. But that's not really a good answer. It's like this--I think they have a point.

Spider: What's the point?

Anger: Well, the main menace they're reacting to is sex, and that's the thing they always come back to. They have a big pile of clippings from different papers on the Beatles and whenever the excited reporter gets to saying, "It was just like an orgy!"--well, you can see everyone just bug out their eyes and get very upset. So I think that's the thing that upsets them.

Spider: Well, why do they call it communist, instead of just good old fashioned sin?

Anger: Because it works exactly like the devil worked for the Church in the Middle Ages. The reaction that these bags get from the word "communist" is exactly the reaction that the word "devil" had in medieval times. Like in Medieval times you were accused of fucking with the devil, or the Church burned and tortured you until you admitted it and all that. Now the nuts say anything, you know, like that these songs for nursery school are pinko or something like that. The kids' songs say "love everybody" instead of saying just "God Bless America."

Spider: Why do you think they chose the Beatles and not various other rock 'n roll groups?

Anger: Well, they claim that the thing that upsets them is the beat of the music. They say that the beat blocks the brain, and then all the kids' inhibitions get loose. Because they've all been taught to be good, you know, and not to tear off their clothes in public, and not to kick holes in doors, and not to do a whole lot of things. And they described this one concert in Seattle, where a twelve-year-old girl tore her blouse off, as if that's really going to shake everybody up. I talked to Barney Rossett, the publisher of Grove Press, when he was here last week. He said, "Don't underestimate these

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kookie groups like the Citizens for Decent Literature; when they get on to something they will bug and bug their congressman, or they'll telephone. One old bag will notify another, and like there's a thousand notified in five minutes via the telephone. They jam the phone, either to the fuzz or whoever they're bugging, or the public library if they want a book removed, or a theater if they want a picture taken off." I'm talking about small towns, not big cities. You know, it's the Ku Klux Klan, it's sheer provincial terrorism. And it's not just small towns because a Catholic pressure group is behind the current cleanup campaign for North Beach. A hell of a lot of the time, people give in to them and think they're basically, you know, like good people. But they ain't.

Spider: Well, getting back to our original question: what things are in young America's mind?

Anger: When I was in high school, popular music was like Glen Miller. But what you have now, and I'm speaking about American music and I'm not even bringing up the Beatles, is content in these records. I find not only a smouldering rebellion against the whole order of the adult world, but a desire to escape into the romanticism (and it's always romantic) of the death wish. It isn't even disguised. In a song that came out about three months ago called "The Last Kiss", something happens on the freeway and a guy's girlfriend goes through the windshield, so he pulls her back for the last, bloody kiss. There's also a new attitude towards death: sense of black humor. The kids dig these songs on one level, but on another level they're not taking them seriously.

Spider: What are the bike riders in *Scorpio* like? Were they a typical motorcycle gang?

Anger: This group was from Brooklyn. There are some superficial similarities to other groups like dress and attitudes, but some go a lot farther. Like, the Hell's Angels go farther than most groups. My group doesn't have a name. They just hang around together. Most of them are married, have a couple of kids already, are in their early 20's. They got married just after high school. Most of them have jobs, either as truck drivers, mechanics, or unloading fish down at Fulton's Fish Market. Most of them have an Italian background. I see the bike boys as the last romantics of this particular culture. They're the last equivalents of the riders of the range, the cowboys. The horse has become a *mechanical* thing, but it has the appeal that horseback riding has--it's out in the open air and you're really in contact with the elements and danger. Also, skill is required to ride one and not flip, not go down. There used to be large areas where they could ride without being bugged by cars or bugging cars in return, but now the cars have

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taken over everything.
Groups like the Hell's Angels have so completely got this image going. For instance, I was out with three of them here in North Beach and they didn't even have a bike--they came in a car. But just because they wore their colors, little sleeveless levi jackets with "Hell's Angels" on them, suddenly we had tow patrol wagons with riot dogs surrounding us. Just for three guys! It's like the fuzz were going to put down an insurrection. We managed to split. But now whenever the Angles are recognized they are going to be buffed by the fuzz, and this brings out all the worst in them.

Spider: What do they do when they grow up?

Anger: There comes a day when they get married and then their wife gets pregnant and then it's impractical to ride around, and so they sell the bike and get a car. That's the big break for a motorcyclist--when they sell out for a car.

Spider: What don't you like about left-wing politics?

Anger: Well. I'm removed from it, you know--I don't move in it. But one thing that does bug me, and which is sort of a tradition, is a kind of solemn self-righteousness. In one way they're as bad as the Christian Crusaders. They have the idea that society is perfectable, and that man is perfectable. I think that life and man both will always be a mess, that the life instinct is messy, and that people who want to clean it up ultimately get into a position like Hitler, who, through his logic, *had* to send the gypsies to the gas chambers along with the Poles and Jews, just because they were messy and didn't fit into his scheme of things. The idea of gypsy bands traveling around on their own in caravans, and not saying "Heil" to any social order, was just too bugging for words, and that's how the gypsy nation in Europe was slaughtered along with the rest.

Spider: Do you think that in modern times society is moving closer to a clean world, or do you think that modern society is becoming more tolerant of messiness?

Anger: The positions are hardening. While I was in Europe, friends wrote me that there were girls in San Francisco--up on Grant Street--who were arrested for going barefoot. They even found a law against *that*, against like indecent exposure of your toes or something, I don't know what. But they did. But something that's happened in the last ten years in California, particularly Southern California, is the way the surfers dress and the way the surfers wear their hair. Quite often they'll never wear any shoes all summer long, and this is when they go to a movie or when they go in the streets, and quite often you'll see a couple of dozen guys in the beach

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towns, the business district, topless. And when you think that in the 30's they were arresting men in New York and in California for not wearing a top on their bathing suits...

Spider: Why do you think that the so-called civil libertarians refuse to support actively the people who spoke at the "obscenity" rallies at Cal and were arrested? More personally, why did you give a benefit showing of your films for the Fuck Defense Fund?

Anger: I've always felt that most civil libertarians have a bugging streak of puritanism in them. They've always had, since the 30's. They used to have something that is worse: no sense of humor whatsoever. This mentality is hanging over some countries--such as England--like a pall. They tend to condemn everything that isn't "serious" and good for everybody--and they have a very limited idea of what is good for people.

Spider: Aside from defending those who were arrested, what do you think was the significance of the issue in the first place?

Anger: I think it was a very good thing to have things like the taboo word and the taboo spiders come out of the woodwork. I prefer to see it in a poetic sense as part of the Aquarian Age which began in 1962.

Spider: What do you mean?

Anger: As an artist I use astrology like colors. I use it in a poetic sense. The Aquarian Age is actually the precession of the constellations.

Spider: How long does it last?

Anger: 2000 years. The one that ended in 1962 was the Piscean Age, the Age of the Fish, which was the age of Jesus Christ. Where the Piscean Age was ruled by Neptune, planet of mysticism, the Aquarian Age is ruled by the planet Uranus--the most erratic planet of all. It's the sign of the unexpected, revolution, for one thing. And that doesn't mean revolution necessarily taking place in the streets, though it's that too. But it's also a revolution of inner space--Man discovering himself. But, you know, everything's happening on schedule. That's what's so groovy. There was a Stellium in 1962. When all these stars get together once every 2000 years, when all these planets, the way we look at it from Earth, are all grouped together real tight, this is called a Stellium. The Indian astrologers, you know, predicted in 1962 *finis*--the end of the world. And mobs of Indians were so disappointed when the day passed and it wasn't the end that they lynched some of the

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astrologers.

Spider: And what you're saying is that it wasn't the end of the world, it was just the end of an era.

Anger: The end of an era. The Era of the Jesus Hang-Up. And the new thing is happening right now. The last 2000 years were based on renunciation, sacrifice, and guilt. The fight for the next generation, the next 25 years, 50 years, just the beginning of the fight really, is skinning off the shell that's left over from the last era: the idea of guilt associated with sexuality and also associated with social responsibility. To begin with, this era has to be--it'll make plenty of mistakes--but Man has to become like a child again, and, well, I see it happening. I see it all over the world, in practically every field. In the arts I'd say that something which will prove to be a very temporary phenomenon but which nevertheless reflects it is Pop Art. But I also see it in machine forms. I see it in the kustom cars that these kids make that are really some sort of Buck Rogers rocket ships. In other words, what they're really doing is inventing a power machine--they want to go *way out*. Right now and for the next seven years, something is happening. Neptune, the planet of mysticism and idealism, is in the sign of Scorpio which is its most inimical sign, because Scorpio is the sign of sexuality and is very materialistic. It's something you grab hold of, whereas Neptune is way out there--that's mysticism. It's the weird situation of **a mystic planet in a magical sign: Scorpio.** Magic is something that's dynamic and active, whereas mysticism is contemplative. That's the difference between the two.

The scorpion is a magnificent bug. It's actually an arachnid. It's armed, you know, like a battleship. I had one. Someone brought me one, and I kept it for a couple of weeks. But then I put it up on Telegraph Hill in the park because I thought it would die. There weren't any flies to feed it. But for two weeks it didn't eat, yet you'd stick a little toothpick at it and Wham! And the spider is the same way. I see the spider not only spinning webs but being capable of biting. In other words, they're related. The sign of Scorpio, which is death and resurrection, is like the poisonous bite that makes the fever that makes you well. A spider, if you really want to analyze it, I mean, let me just make as an aside a very interesting thing. It was one of the two taboo animals, or beasties, in ancient Egyptian art. They had plenty of spiders, they've always had plenty of spiders, in Egypt. But they chose certain bugs like the beetle or the scorpion to deify, and they left out two things that were always plentiful in Egypt: the spider and the bat. And it isn't that they even relegated these to some kind of inferno or hell, like horror films do when they associate spiders and cobwebs and

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bats with freaky things. They simply did not exist in Egyptian art. And one of the reasons I finally got from an Egyptologist is that they considered the spider a vampire, and because it's a vampire, they had to take it out of their solar religion. And the bat also is something associated with night, so it was taboo. But the spider is cunning--it makes its web, which is a design of the universe, it waits for the fly, and then it moves. And it moves fast.

Spider: Let me tell you how we got the name "Spider" for our magazine. We were trying to think of a name for the magazine, and what things we wanted to pay most attention to. And so we finally decided that it was sex, politics, international communism, drugs, extremism, and rock 'n roll...

Anger: Well you see, I didn't get around to talking about drugs, but the way Neptune operates in Scorpio right now is that you want to break out. In other words, you need a release even beyond the bodily release of sex. It's to get high. The ecstasy of the saints or of the voodoo worshippers is the same thing. But Scorpio is unscrupulous--it's shortcuts and drugs. In other words, any means to the end. The push from the unconscious to get free, to get high or to get beyond, is so great that it will seize on drugs as a means of breaking through this god-awful inhibition. On college campuses of the squarest kind they are now smoking pot. Something probably happens even to the squarest kind of person when he gets stoned. Once you've seen through even that much of this husk or veil of the universe, I don't care how you pierce it, it's like a shock. Some people get a shock by seeing some sort of accident in the street. I have seen a five year old get smashed like *that*, and that's one kind of shock, you know, it's a visceral shock. The whole idea of a little being dancing and alive and then out--it's gone. Another kind of shock is--I've been in an Arab riot in Cairo, when the native mob was having a grand old time going around burning everything that my civilization stands for. Burning typewriters, burning automobiles, even burning money, you know; I could not believe it. They broke into these European restaurants, took out the cash registers, and burned the money as though it were evil. This was in the huge anti-English riot of 1952. I saw this mob action as a dark ecstasy, this terrible thing that was going on, I mean, was a beautiful and awesome thing. It's terrible that they murdered, but when you realize how many aeons the Arabs had been crushed then you can understand this kind of insane explosion. And that's why I think that the drug thing is as important as sex for our time.

Spider: Well, we were thinking of the letters that began those words, and wrote them out in different combinations. When we wrote S,P,D,R, we thought "Spider". That's how we

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picked the name.

Anger: That's terrific. I think that if you don't get put off by the word you can see that what is happening is what I call Magick. Magick is when you put two and two together and you get five. This doesn't mean like mixing up something and--BANG! It means ideas and things happening--action. And I think there will emerge an entirely different way of looking at the world.

Spider: What do you mean? How will we be looking at the world two or three generations from now?

Anger: I think that there will be a sense of beauty where there was once revulsion and horror. I know of the existence of a beautiful Mexican child who is being held captive by scientists in Los Angeles. This child is now two years old. It is very intelligent. It has one beautiful perfect eye in the middle of its forehead and that is all. And the scientists--the doctors--they've got this child in an isolated clinic room and there are no mirrors and it has never seen another child. And the mother, of course, when she learned she had some kind of freak, looked at it for maybe a split second and screamed for the saints. They took the baby away and she's never seen it since. It's like the child has just about been born out of a seashell. This cyclops child could lead the world. I see something different emerging; something even biologically different. There's a marvelous picture of the Beatles in which they are standing, one behind the other, and it looks like Ringo has eight arms. The Beatles are a group thing. It's no longer just an identification with one figure, like a single leader. That's another possibility.

But the one thing to remember about the Aquarian Age that we're in is that Uranus is the planet of surprises. It rules us right now--I don't think that the period we're living in is going to be just a big drag. Things are going to happen. It's a battle absolutely of generations; it's Shakespeare--he says,

> "Crabbed age and youth cannot live
> together;
> Age is full of grief, youth is full of
> pleasure."

You can be 80 and not be crabbed age--this isn't the question. But unfortunately, most of the senior citizens are totally crabbed. Their minds are shrunken like crab apples. That's why there is a kind of war going on between the students and the Regents and Administration. That generation has proven that no dialogue is possible. They and the young cool just aren't the same race.

Spider: We get that feeling sometimes.

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Anger: But don't you see? They're... Do you know what colleges were like in the 20's, when they were doing Rah Rah and Boom Boom and all that? Well, Wilson called Yale the nicest country club around. And that's what the older generation is falling back on. College used to be a big special scene: it was the fraternities, the dances, the football team, getting your diploma, a whole kind of scene that doesn't mean a fuck anymore. It's so dead and gone that even such things as caps and gowns should just be tossed out completely. But then I copped out of college. I couldn't make that scene. And the reason the Regents are now so upset is that the only thing the big wheels--the business wheels--want from a college graduate is a replacement part. They want minds that can think about all these electronic problems or run computers, but that's to replace parts, because they always need new ones. And they don't want to be bugged by anyone else.

Spider: What kind of world are we getting ourselves involved in? What will things be like 20 years from now?

Anger: Well, I don't know if 20 years will see us even begin to solve some of the things which have to be worked out, but the central problem for this generation--and it's really so enormous a problem that we haven't begun to scratch it-- the central problem is the racial one. It has to be faced and gotten through. And just behind that, there's the sexual problem. But I don't work in politics. I feel that I'm involved in what is going on, but there is no kind of party that exists right now under any banner that I could go along with. As far as the future goes, I think that the biggest difference between now and the time when I was in high school is that there are more people in the world. It's getting crowded everywhere. But something different and new is even going to come out of all this pushing together. There'll be conflict. It won't be rosy, but I'm sure something very exciting is going to happen. I really think there's a subterranean state of war, and the crucial moment will be when the big boys begin to put two and two together.

Spider: Specifically, what do you mean?

Anger: Well, suppose instead of the Regents, the federal government were reacting this way. That's exactly what I mean. Because you have a situation where no dialogue is possible. And that's why I say in my commandments that if somebody bugs me, then it's him or me. Regents (I'm speaking symbolically) are stronger than you are, but they've got to go. That's what the word "kill" means. You know, literally drop dead. I see some very beautiful things happening, but I also see some things that will seem like flipping out, like a St. Vitus Dance epidemic. I have another film up my sleeve which will express some of these things. I don't know whether I'll be able to get

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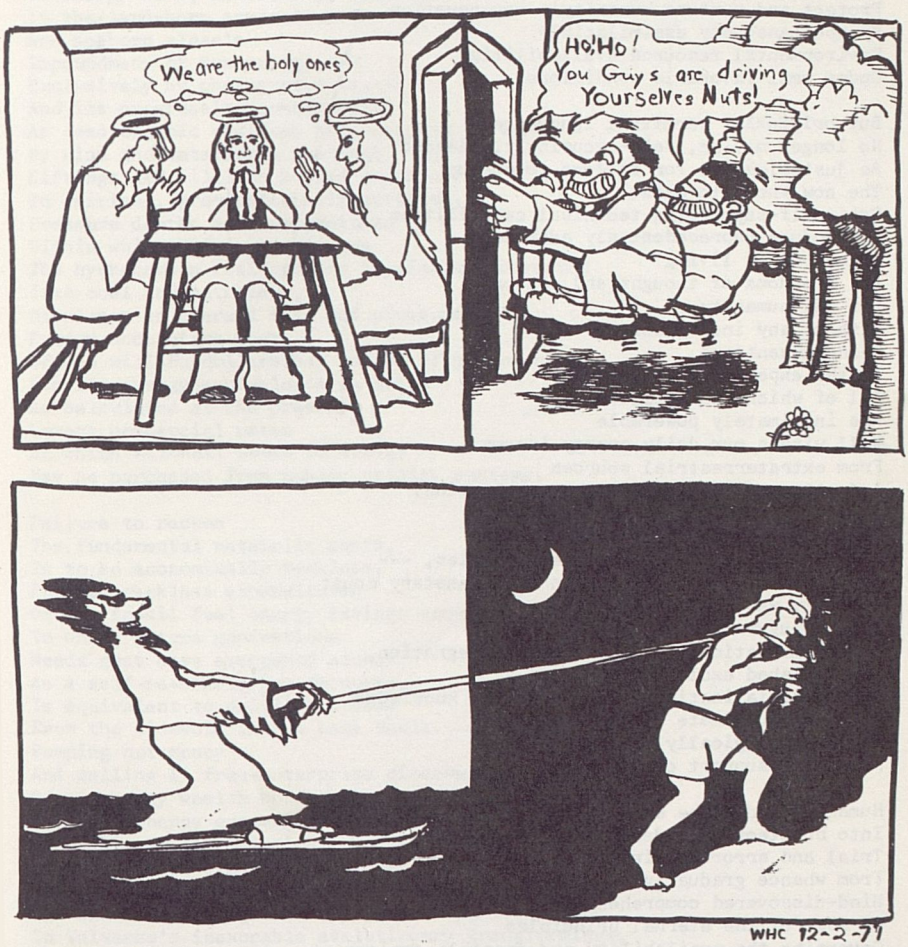
it out. What I wonder is, can a group, like a group of young people, sustain a relationship with each other as a group--sustain something that must be love, call it whatever you want. It's kind of communication. You see, I consider myself and just about every young group I meet, like you, as part of something that I call Magickal that is going on. There is something Magick in the air right now. Like the old saying goes, when the time arrives for an idea, nothing can stop it.



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SENT BY R. BUCKMINSTER FULLER AS A TELEGRAM TO SENATOR EDMUND S. MUSKIE OF MAINE

There is dawning world-around comprehension
Of the existence of a significant plurality
Of alternative energy source options
Available for all Earthians' vital support
Which now intuitively fortifies
Maine's far-sighted citizens' and friends'
Spontaneous expression of abhorrence
For any petroleum refineries or storage
Anywhere along its complexedly meandering
Deep-tide coastline.
Because humanity is born
Helpless, ignorant and naked
Nature must anticipatorily provide,
Protect and nurture humanity's regeneration
By spontaneously assimilatible
Environmental resource availabilities
Under omni-favorable conditions.

But originally permitted ignorance
No longer may be, self-excusingly, pleaded
As justification for failure to employ
The now known to exist
Omni-self-supporting technical capabilities
To produce unprecedentedly advanced
Standards of living
And freedoms of thought and actions
For all humanity,
Without any individual
Being advantaged
At the expense of another,
All of which feasibilities
Are inanimately powerable
Well within our daily energy income
From extraterrestrial sources
And all accomplishable without pollution.

By tapping the billion years' long
Safe-depositing of fossil fuel energies, ---
As petroleum and coal, within the planetary crust
Humanity was self-startered
Into inauguration of world-around
Electromagnetic energy resources integration,
Accomplished exclusively
By industrialization's ever-evolving knowledge
Regarding ultimate feasibility
On non-biologically harvested
Metabolic support of all humanity.

Humanity had to be self-startered
Into bounteously underwritten
Trial and error gropings
From whence gradually emerged
Mind-discovered comprehension
Of some of the eternal principles
Governing the availability and feasible employment
Of cosmically-constant, astronomical quantities
Of inherently inexhaustible energies
Of self-regenerative Universe.

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Because humanity now has learned
How to gear directly into the inexhaustible energy
Of the main engines of Universe
It is no longer justified in attempting
To accomodate its ever-expanding,
Knowledgeable functioning in Universe
By ignorantly keeping its foot on the self-starter
To obtain its evolutionary propulsion
Only from the swiftly exhaustible
Fossil-fuel storage battery energies
Or from its perishable, one-season crops.

Realistic accounting
Of the time and foot pounds
Of energy-work, invested by nature,
In the land-born agriculture's---
And seaborn algae's
Impoundment of Sun energy,---
Exclusively by photosynthesis,---
And its progressive conservation
As dead organic residues progressively covered
By wind and waterborne dustings
Siftings and siltings buried and sunken
To critical, gravitationally actuated,
Pressure depths and temperatures
Within which unique conditions
The hydrocarbon residues are chemically converted
Into coal and petroleum,
Discloses an overall time and pressure
Energy accounting cost
Of one million dollars per gallon of petroleum
(Or its energy equivalents in coal)
As calculated at the present
Lowest commercial rates
At which kilowatt hours of energy
May be purchased from public utility systems.

Failure to reckon
The fundamental metabolic costs,
Is to be economically reckless.
Further reckless expenditures
Of our fossil fuel energy savings account
To which future generations
Needs must have emergency access
As a self-re-startering recourse,
Is equivalent to drilling a hole
From the sidewalk into a bank vault
Pumping out money
And calling it free-enterprise discovery
Of an energy wealth bonanza.
Physical energy convergent as matter
Or divergent as radiation,
Compounded by weightless metaphysical know-how,
Have altogether provided the means
For Earthians' progressively greater participation
In Universe's inexorable evolutionary transformings,
The participation being accomplished exclusively
By Human-intellect directed ingenuities,
In progressive rearranging
Of the physical furnishings

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Of our spherical, space-boat home,
In such a way as progressively to support
Ever-more lives in ever-more ways
With ever-increasing health.

Naught gets *spent* but human time
As cosmically inexhaustible energy
Is tapped exclusively
By intellect-discovered and employed
Cosmic principles
Which to qualify as principles
Must be eternal.

Real wealth
Is Universally self-generative energy
Harnessed by mind to regenerate
Human lives around our Planet,---
Increasing wealth means
More regeneratively self-supporting days ahead
For more lives
Ranging first within Earth's biosphere
And subsequently by ever-increasing exploration
Within Earth's extra-terrestrial
Cosmic neighborhoods.

Such ever-evolving greater know-how wealth
Provides the means
With which specifically to augment
The ever-expanding anti-entropic
Intellectual responsibilities of humanity
As local Universe's local problem solver
Which problem solving is human intellect's exclusive,
Complementary and essential functioning,
In support of total, scenario-Universe's
Self-regenerative integrity.

Physics shows
That universal energy is undiminishable.
Experience teaches
That every time humanity initiates
Intelligibly logical experiments
Human intellect always learns more.
Intellect cannot learn less
Intellect is growthfully irreversible.
Both the physical and metaphysical advantage gains
Of intelligently harvested know-how,---
Reinvested as competent energy-transforming,---
Always produces
Inherently irreversible wealth growth.

This is contrary to yesterday's
Now scientifically and technically obsolete
Concept of a self-exhausting,
Ergo, progressively expendable---
And ultimately spent Universe,
With assumedly progressive failure phases
And their negative economic accountings
Whose bankruptcies are as yet employed
By all political economies,
Together with their depletion tax evasions

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Covering only physical property depletions
With no capitalization, nor depreciation allowances
Of the metaphysical competence of humanity's mind
Without which there would be
Neither human life self-awareness
Nor its wealth
Of capable conceptioning.

Modern physics renders it incontrovertible
That celestial energy is nonexhaustible
Only the fossil fuel savings account
And perishable human muscles
And the self-startering, but limited
Hydro-carbon impounded energies
Are terrestrially exhaustible.
Humanity's economics are as yet ignorantly geared
Exclusively to the annual energy harvesting cycles
And bankruptcy accounting
Of ignorance permeated yesteryear's
Human brain reflexing
As conditioned, by floods, fires, droughts, and pestilence,---
And frequently ruined crops,
Whereby millions of humans perished.

Brilliant and potentially effective
Managerial capabilities and leadership potentials
Are as yet diminishingly extruded
Through minuscule accounting and customs apertures,
Which force those capabilities
To concetrate exclusively and myopically
Only upon *this* year's production
This year's election and
This year's profit
While blindly overlooking
The infinitely reliable cyclic frequencies
Governing the 99 per cent of reality
Lying outside human sense apprehending
And lying outside this year's consierability
Which vast, invisible reality
Is the great electromagnetic spectrum
And its astrophysical event recurrency rates,
Which range from split-second atomic frequencies
To multi-billion year astro-physical lags
All of which cyclic event reoccurences
Are guaranteed to humanity as absolutely reliable
By the exclusively science-discovered
Cosmic behaviors' integrity.

Despite the industrial revolution's
Momentary fumbling and mess---
As occasioned uniquely by the myopia
Generated by 'this year's accounting' limitations---
It now is discernible scientifically---
That unwitting Earthians
Gradually are being shifted
Over an epochal theshold,
Successful crossing of which,---
If not totally frustrated by reflexive inertias,---
Will witness the successful gearing of all humanity
Into the eternally inexhaustible, energy system
Of òmni-self-regenerative celestial mechanics.

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Humanity is as yet acquiring
Its many human support increasing
Techniques and practices
For all the growing reasons
We only expand wealth production
Under mass-fear mandates of war.
We could acquire, peacefully and directly
A total humanity supporting productivity
And comprehensive enjoyment of our whole planet
By simply deciding to do so
Whatever we need to do
And know how to do
We can afford to do!
This is the cosmic law
Now in clear scientific evidence,
And the more love,
The more satisfacory the wealth augmentations.
Whether history entrusts you or others
With progressively greater responsibilities
At this crucial-to-Earthian's-survival moment
Depends upon whether you, they, or both of you
Comprehend these epochal transitional events.

The State of Maine's Bay-of-Fundy's
Twice-a-day, fifty-foot tides
Are pulsated by Sun-compensated, Moon-pulls,
Those tides will be pulsated twice daily
As long as the Moon and Earth co-orbit the Sun.
Fundy provides more economically harvestable,
Foot-pounds of energy daily
Than ever will be needed by all humanity
While attaining and sustaining ever-higher
Standards of living,
Greater and more healthful longevity
Than heretofore ever experienced.

It is economic ignorance of the lowest order
To persist in further surfacing and expenditure
of the Earth's fossil fuels---
It is even more ignorant and irresponsible
To surface and transport oils
Of Arabia, Venezuela, Africa and East Indies
To refineries and storages on the Coast of Maine
Thus putting into ecological jeopardy
One of the world's
As yet most humanly cherished
Multi-islanded, sea coast wildernesses.
In view of Fundy's tidal energy wealth
Such blindness is more preposterous
Than "carrying coals to Newcastle."
It is accelerated human suicide.

On the other hand we must recall
That Passamaquoddy's semi-completed
Tidal generating system
Was abandoned on the officially stated
Ignorant, political-economics assumption
That electricity could not be transmitted
Beyond 350 miles
And therefore could not reach
Any important industrial centers.

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It is known in political actuality
That Passamaquoddy was discontinued
Through the combined lobbying efforts
Of Maine's paper pulping and electric power industries
Whose political policy logic was persuasive
Despite that those two industries
Have together succeeded
In polluting Maine's prime rivers
To kill all but a pittance
Of the Maine coast's once vast fishing wealth.

Space-effort harvested
Scientific know-how and the computer capability
Have together made possible
The present inauguration
Of one million volt transmissions
And a 1,500 mile delivery range
Of underground, electric power network systems.
Many Passamaquoddies could be plugged
Into the invisible underground,
Transcontinental, time-zone spanning,
Electrical energy network integration
And thence relayed to Alaska
While picking up Canadian Rockies water power
Along the way.
The integrated North American network
Could not only be trans-linked
Through Mexico and Central America
Into an Amazon-to-be-powered
South American network
But also across the Bering Straits
From Alaska to Russia
To join with their now completed
Eastern extension of Western Russia's network
Powered by northward flowing, into-the-Arctic
Siberian river systems.
This now feasible, intercontinental network
Would integrate America, Asia and Europe
And integrate the night-and-day, spherically cycling
Shadow-and-light zones of Planet Earth
And this would occasion the 24-hour use
Of the now only fifty per cent of the time used
World around standby generator capacity
Whose fifty per cent unused capacities
Heretofore were mandatorily required
Only for peakload servicing of local non-interconnected energy users.
Such intercontinental network integration
Would overnight double the already-installed and in-use,
Electric power generating capacity of our Planet.

And lying well within
The progressive 1,500 mile hookup reachability
From an American-Russian power integration
Are the intercontinental networks of China, India and Africa.

It is everywhere around the world
Incontrovertibly documented
That as the local kilowatt hours
Of distributed electrical energy increase

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The local birth rate
Is incommensurably diminished and longevity increases.
In respect to any of its specific geographical areas,
The birth rate of that area
Trends in inverse proportion
To electrical energy generation and distribution,
The sudden world population bulge
Which has occasioned
Dire population increase predictions
Was occasioned first by the failure to die
Of those who used to die
And secondly by the continued new birth acceleration
Only within the world's
As yet non-industrialized countries,
As world industrialization will be completed
By twentieth-century's end
The ever-diminishing birth rate
Of the industrial countries
Will bring about world population stabilization
by 2000 A.D.

Universe has no pollution
All the chemistries of the Universe are essential
To its comprehensive self-regeneration.
The ninety-two regenerative chemical elements
Associate, disassociate and intertransform
In a wide range of time-lag rates.
All the dumped chemistries
Spoken of ignorantly as "pollution" or "waste"
Are always needed *elsewhere*
In the intelligent integration
Of World-around energy regenerating economics.
All the sulphur emitted annually
From the world's industrial chimneys
Exactly equal to the amount of sulphur
Being taken annually to keep industry going.

And while the by-product chemistries
Are in high concentration
Before going out the stacks or nozzles
They can be economically distributed
To their elsewhere-needed functioning.
After leaving the stacks or nozzles
The byproduct chemicals are so diffuse
As to be economically unrecoverable
In their diffuse state the byproducts
Often become toxic
To various biological species,
The ultimate overall costs of which
May easily be cessation of terrestrial life.

Yesterday's preoccupation with major energy harnessing
Primarily for the killing of humans by humans
Now can be comprehensively redirected
To intelligent and responsible production
Of a total-humanity sustaining system.
Swift realization of all the foregoingly considered
Epochal transition of human affairs
From a "might" to a "right"
Accounted and inspired

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World economics
Is now scheduled for swift realization
By inexorable evolutionary events
To be accompanied by maximum social stresses
With only one alternative outcome
To its total human advantaging---
The alternative is human extinction
Aboard our Planet.

All thinking humanity young or old
Not only will condone
Reversal of public position taking
When it is predicated upon
Better and more inclusive information
Than was at first available
In fact it will think even more favorably
Of the integrity
Of those who admit error for humanity's sake
At the risk of losing previous political support.
So well informed is the young society
Which now is taking the world initiative
That only such integrity of long distance thinking
And unselfish preoccupation
Can win its support.

I pray you will make your stand
Swiftly and unambiguously clear
As being against any further incursions
Of petroleum into Maine
Or of pipelines in Alaska.
I pray that you will concurrently
Initiate resumption of Passamaquoddy
Together with initiation of a plurality
Of such Fundy tidal energy convertors
With combined capacities
Sufficient for celestial-energy support
Of all human life aboard our Planet
To be maintained successfully
Until Earth-based humanity
Has successfully migrated
Into larger cosmic neighborhood functioning.

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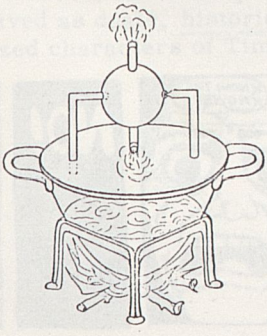

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The following two pieces appeared in the magazine Set *edited by Gerrit Lansing. The first statement was in the issue of Winter, 1961-2, and the second in the issue of Winter, 1963-4.*

GERRIT LANSING

(editorial

THE BURDEN OF

SET #1

Now as the Influx begins to be felt, time to build the
arks, to nominate
proclaim the Qualities

In time of the "Breaking of Strength"
the burden (droning undersong)
is to make the connections
inter sed extra

The Work of the Renovating Intelligence

This magazine is about the poetic exploration of the swarming possibilities (some occult, unused) in American life, urban & local (the rural is no longer available to poetry; to life?), here & especially now. Its character is conceived as dual*, historical & magical, the emphasized characters of Time.

* See Appendix I to this essay, "The Current Prejudice Against Duality," & Appendix II, "Time is (the) Number 2."

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1. the emphasized characters of Time

The gates of memory & intuition, history & magic, open from a "windowless" event into Time, the fateful Cross (crux) behind the shifting hexagrams.

To discover our spacetime address we must fix our position in time as well as in space. And this "address" (our mode of being) is personal but also collective: "We are continents if we are." The way Americans, now, receive time differentiates us from others, say Peking man, the ancient Greeks, the Indians. Homogeneous time doesn't exist in human experience, our living time is mythically organized, "favored" by the singling out of "points" distinguished for their values. Since "myth creates time" (G. van der Leeuw), the sense of history as well as of subjective past & future is magically determined, just as the magic appropriate to an age is historically determined.

You have then two ways to take a fix on Time, one by investigation of history, "from the inside out," another by investigation of the dark interiors, "from the outside in," like by objectifying an image (magic), the Path of the Names.

This orientation (eastfacing, sunrising) in Time man can only make individually, in his inwardness, but it is not less factual or more imaginative for that: As Wallace Stevens says, "To be at the end of fact is not to be at the beginning of imagination, but it is to be at the end of both."

Thus "poetry increases the feeling for reality" (again Stevens) & the historic fact (our scene) lies equally beneath all the moving poetry & all the moving science we make. Poetry & science invisibly concur between the poles, & the Properties of the World are summarized for any point-moment by the Riemann-Christoffel tensor or by a poem

&

"... in the beauty of poems are the tuft and final applause of science." (Whitman)

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2. our scene & how it disposes the poem

Now in these, as Olson says, "dragging years of the fish bones," what is to be hailed?

The breakthru to the world of forms

by insight
by outsight
by upsight
by downsight

: the form of the poem must be our habit

A. for use now THE INSTRUMENTS

the elementary, or physike — the disposables

Kosm-anthropologia { economics, history & prehist., the "sciences", linguistics, mythology, the Works } cultsure { "aesthetics", "philosophy", "religion", humanitas }

B. the Knife of Set

The weight (threat & promise) of "artistic" permanence or greatness is now lifted from the soul of the seer (persistence remains an interesting question). Since kulchur is dead (bred cultsureness: that goes on) we are all enveloped by its stink (some poems measure the sensitivity of the nose) but energy at least & at last is free to recognize itself (the work of the 13th Aeon or Sphere or Month).

Poetry falls on an age of undoing like nothing known before, & rite measure & metric flow from the crystal of the Moment. Memento & talisman are dimensional of the Influx. The metric of the contemporary must be a gain of form arising from the shift of obedience. Although this shift is in part a displacement from traditional external forms of order to the shape of the person, no doctrine of "personism" or "composition by hazard" need be invoked to the creation of the poem.

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"The basis of all metrical determination must be sought outside the manifold, in the binding forces which act on it," the great 19th-century mathematician Riemann wrote, & if applied to poetry, as everything must be sooner or later, this delivers the poet to the full complexity of how he uses what comes in to him. Alchemists & cooks have the same problems, how to manage the heat:

A parfet Master ye maie him call trowe
Which knoweth his Heates high and low.

Then "image is deficiency," as the Gnostics say, & any typology of poetic "Image" gets hung up on the line of similarity, comparison. (Insofar as "image" is referential it means a leak in the vessel, which should be Hermetically sealed for the cooking, en daube.)

The poem had better move OUT

C. the Path of the Names

The breath of Set may bring "criminal violence," but it also renews, desiccates to freshen.

1484, in Rome, Joannes Mercurius de Corigio, wearing a crown of thorns inscribed "this is my son Pimander I have chosen," preaches, pushes leaflets, proclaims "the new newness of newnesses greater than all miracles." It came to pass.

Now almost 500 years later (Orwell's 1984 itself can give us little, too spiteful too bright lacking the foolish wisdoms -- but was its date whispered him by the Lord of the Gates of Matter & Child of the Forces of Time?). Again the Revolution of the Quarters, & now the Advent of the Sign of Man.

Mathesis today demands research in the world of letters, combinatorial analysis of the alphabet of the gods. Two books by A. E. The Candle of Vision & Song and its Fountains contain, among much romantic detritus of the European past, records of "spontaneous" experiences among the Flashing Tablets where language originates. In the 13th century Abraham Abulafia more systematically studied the Path of Combination, foreshadowed a time like ours when prophecy would be self-confrontation & the magic of inwardness be hidden in the autonomy of the visible, the uses of secrecy obscured, hard to come by.

"In this the things without figure are figured."

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Appendix I. The Current Prejudice against Duality

Such a push toward One & away from Two, among contemporaries, it needs to be said more sharply, 2 yes. There is a formula called the Zero =s 2 equation, not mathematic, & would be mistaken to treat it as such. Process involves the consideration that since it is always possible to reduce any expression to Nothing by taking 2 equal & opposite terms, n + (-n) = 0, one should be able to get any expression desired from Nothing by being careful that the terms are exactly opposite & equal, 0 = n + (-n). (It is obvious that what is termed in magical work the Equilibrium is a development of this principle.) The 0=2 Formula evades Monism, Dualism, Nihilism, Pluralism, etc. & therefore when it is said, "there are 2 ways," the simplicity of 2 is meant, not not-one, not-three, etc. (two friends to whom I showed early drafts of this essay bridled at any use of the word "dual," one of them saying it was because he "took the Zen standpoint.").

Appendix II. Time is (the) Number 2

A. That Time is the Number 2

twi di dvi
two duo *duwi
ti (Arm.) dayate ("he divides")
(opp. in advaita vedanta

time } *di
tide }

B. That Time is Number 2

di
schiz - divide, split
skhizein
schizen (Middle High Ger.)
scheissen, scite, shite = No. 2

ergo, Time is "filthy lucre"

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GERRIT LANSING

(editorial

THE BURDEN OF SET #2

ephphetha

it is morning

& you are waking up from a
dream of fishbones & broken vessels

to the new attentions

a new praxis SET
toward the unfolding of the Moment

by the operation of a scientific illuminism along 2 axes,

	(1) ax is	(2) ax is
2 axes: recap., BURDEN OF SET #1	of history, memory "the outside in"	of magic, no word for, "the inside out"
	analeptic, against time's ←	proleptic, with time's →

labrys:

the double ax, & in labyrinths, beginnings, opening of the figures of Time that compose the structure of our necessity, how by poetry we investigate the needs.

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1. the new attentions

with (3) GLANCES AT VALUE

o.k. Let it come down, in on us, all of it, so much as we can, & then to get it out again. That was an Epitome of Yoga, inside front cover of SET #1, "SET still, stop thinking, shut up, get Out," & yoga is concentration of experience (exclusion too, yes, but not of experience itself, rather of experiences not really experienced enough, restraint of the modifications of mind in order to feel their source) whose enemy is abstraction, distraction, retraction, any thing or way that hinders the going traction.

It's traction we are after too, the freedom & recognition of. The enemies, listed in THE BURDEN OF SET #1 as "disposables," all function as guardians of Value, not value as tropism, that we all have, but abstract judgment, ideals.

so

2 discriminations to be discriminated: Value, abstract affective discrimination (1), is the enemy of poetry, & of discrimination (2), of & to, what is out there (pointing), the object, that.

Wardens of values, upholders of "crapulous creeds," fear the light of the liberated cortex & the coming ascendency of air.

---

(3) GLANCES AT VALUE

1 In an iron age, bitch,
she strides from iron pinnacle to pinnacle, the pinnacles,
clothed in iron robes, unsmiling,
hair is iron gray, bowels tight.
Nightjars play about her splendid shoulders,
her left hand spills the iron jar of equity
her right hand brandishes the iron flail of separation.
Where she is a darkness is and adjectives,
the line is rigid, her patrols are ugly throats.
She is backward to the dawn of universal breath.

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2. Loot, Archetypal Value

It began in ignorance, away from vid-ya,
birth of value in the straw and dung of the lst (un)stable economies.
Though value never vector, is standard only, there remains the process.
But standard of gold was made gold standard
and when a sign of value (say $)
itself is made a value ($!)
value process desiccates, stands still
turns mechanically in standard
because the normal straight relation
of x the sign (like $)
to that of which it is the sign
grows ghostly, self-reflecting,
craving craving craving endlessly.

Without measure this this this horror!
Who takes measure of value for value
is double damned
makes sickness of metaphor
confusion of tongues.
Lightning breaks tower
as counsel darkens.
Value is brilliantly borne aloft
in hot chariots
while glittering out of sky
hate falls on helpless wheat.

3. Theory of value in itself
must then imply an economic scrutiny,
how an image differs from a thing.

Fluctuation of the dollar:
waving of linguistic formulas
in the wind of mind.

IT IS THE VALUE MOVING

the language of value / rational measure

not rhythm

or moving measure or mastery of time and fire
that is alchemy.

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SO

Value is of the excrementitious nature of Time (wch was sufficiently demonstrated in THE BURDEN OF SET #1, Appendix II, B). The self-realization of energy (13th Trump) in the autonomy of the visible is hindered by the cultsural holdon to European humanitas, that value-system that pinched us all. Come on, it's finished, Europe calling the dance, & Valery should know. To each man, for use, what he has is given, & if he hasn't, well, it's being taken away from him, & pretty fast.

Charles Ives writes, "...if a man finds that the cadences of an Apache war dance come nearest to his soul, provided he has taken pains to know enough other cadences -- for eclecticism is part of his duty -- sorting potatoes means a better crop next year -- let him assimilate whatever he finds highest of the Indian ideal, so that he can use it with the cadences, fervently, transcendentally, inevitably, furiously, in his symphonies, in his operas, in his whistlings on the way to work, so that he can paint his house with them -- make them a part of his prayer-book -- this is all possible and necessary, if he is confident that they have a part in his spiritual consciousness."

We are in a rough time, the most difficult transition age of all, a real Interchange of Tinctures, where a kind of personal life is being exchanged for a kind of "universal." (What is not the person of an age is always experienced as "universe" by the new halfborn thing, the transition to, the baby with only his head sticking out of the vagina into his own time.)

It is the morning of the universal breath.

The old spectre of "greatness" in the arts, of a value-hierarchy into which every work of art (read object of experience) must be jammed, is a white spectre, & as the value of whiteness enantiodromically changes (like the suntan cult today as against that bleached ideal body of European middle age & renaissance), the systems of blackness toward which we are drawn arise. (The systems of blackness, the Ntu of Unison, seem chaos to receding whiteness, but will prove to be "system.")

European whiteness is sepulchre to us & European consciousness a museum.

"Those whose voices are accurate" (as Egyptian priests were called) do not attend to the curators of cultsure, the urbane caretakers. (If they get in the way we carve them with the Knife of Set.) It is not faith, or talk about, aurorals need, it is that, experience of. Then, what is to be attended, the substance of the new attentions, what is not disposable, is materials for the boat to make the crossing, & the tools, kosmanthropological.

As Olson said, "...the work of the morning is methodology," & the new attentions are bearing down.

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2. "Nature" and the next 2000, give or take a few, years

wha you say, "Nay-cher" ? wha you say, "Nay-cher" ?

I said gNature, "birth," prae-gnant
from (g)nasci, to be born. (I no say, "Gno.....

It is born, the new Nature. & what we can say of it surely, though the surety is not our concern, is that it no longer is opposed to Another, a Super- or un- , not hung on, polarized to one of the swimming away from each other Fish. That polarity, that made it seem possible that anything unnatural (not to say Super-) could really occur, has gone away, & reality won't any more be divided between us & the world, the world (or God) getting the bigger share.

a few consequences

A. Food

As control seems to increase, nature turning into human nature (or rather what before was "human nature" now understood as nature, Teilhard de Chardin's "interiorization" animistically exteriorized), food becomes politics, an FDA the central arm of government.

We are what we eat but turn it around, in the whole field (& think of flowers) no division between electricity, poison, medicine, food, drug, elixir. We cannot avoid absorbing microdilutions. All foods are drugs.

from the "Chapters of Coming Out by Day" : "Tem hath built thy house, and the double Lion-god hath founded thy habitation; lo, drugs are brought, and Horus purifieth and Set strengtheneth, and Set purifieth and Horus strengtheneth."

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B. Wildlife & Permission

What was wildlife can't be any longer. An artificial wilderness is no wilderness, a national park is a National Park, in Africa or the moon. Danger does not make a wild life, you can permit danger in sport. Wild life is not game, can never be permitted, hunting & fishing are seasonally permitted, play.

It remains to be seen what cannot be permitted.

C. The Sexual Image

All is permitted. Change in the Heavenly Female Power. As equality of sexes swings around, the biochemical basis of the old differentiation is shifted. This doesn't mean everyone will be "queer," but that as new magnetic centers astrally arise in men & women the scope of both amativeness & adhesiveness will be prodigiously enlarged.

****

1781. the discovery of Uranus, who moves in a cycle of approx. 84 years, 7 years in each sign.

1862. 81 years later Ulrichs uses the word "Uranian," after Plato's Symposium, referring to love of male for male

Aquarius, toward which we move, is ruled by Uranus, according to contemporary astrologers, & ancient Greeks saw the sign as Ganymede.

Uranus dances with Ganymede on the heavenly floor.

****

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In the fragments of Berosus, priest-historian, we can trace a Babylonian genesis from which was later derived both the Hebrew & the orphic (later, the Platonic) myths of the original bisexuality of the first man, Adam, male-female, from whom the opposites were later separated & polarized by the male-female god.

Under the permissions, man will be able to find in woman more the original wholeness, & woman in man.

Marie Delcourt in Hermaphrodite shows the androgynous image of Classical times is a dream of a primordial union of male & female consciousness, closely linked with the vision of the bisexual Phoenix who perpetually renews himself in the fire of the morning of the Great Year.

The Work of the Renovating Intelligence.

Jesus said: "And if you make the male and the female one, so that the male is no longer male and the female no longer female, and when you put eyes in the place of an eye, and a hand in the place of a hand, and a foot in the place of a foot, and an Image in the place of an Image, then you will enter the Kingdom."

D. Vision

10997 B.C. the negative afterimage of looking at the Sun was Man advancing bearing a water-jar

1963 A.D. the negative afterimage of the vision of Man poised in the electromagnetic currents of space is a roaring Lion.

It is still hard to distinguish the form of the Lion, who walks in flame.

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Conversations on Ecology and Vegetation Management

1. Pierre Dansereau to Frank Egler

New York, January 6, 1963

Dear Frank:

As I read Rachel Carson's Silent Spring,[1] I often thought of you, not only because the author quoted you frequently, but because I was so pleased to see some of the warnings you have been sounding receive such an impressive echo.

There have been so many reviews of Carson's book, that I cannot begin to quote them, even less to digest them. It seems to me, however, that most of the adverse criticism is already refuted in the book itself. It is not unexpected that much of it comes from quarters very close to the chemical industries. Without casting undue suspicion upon the motives of the sales promoters of pesticides, one is not inclined to trust their detachment. And this misgiving is confirmed when the critics make the author say what she has not even implied.

One reviewer, among many others who think that this book is important, labels it "the revolt of the ecologists." It is high time, he thinks (and so do I and so do you), that our voice be heard in public places. We have hoped, at various times (in our now lengthening career), that our generation would be getting away from the more sentimental forms of conservation to move into the realm of vegetation management[2] and resource administration.[3] Many useful steps have been taken in this direction, of course, in these days when the military and the physical scientists are developing the new field of biological engineering. Who better than we can tell them what to look for?

When this happens, however, as with Miss Carson, our "scientia amabilis" becomes a "scientia terribilis" and the innocent bog-trotter, tree-measurer, and quadrat-maker a dangerous revolutionary.

There is no denying that we find ourselves in the same boat (if you do not mind leaving the terrestrial habitat for the aquatic) with those who alarm us by news that radiation is poisoning our lives and maybe that of several generations to come. Thalidomide and DDT are certainly part of the same scheme, not to say suicidal conspiracy, as nuclear warfare. What kind of a world do we want? We cannot just let things happen, we cannot allow some of our activities (whether agricultural yields or military defense) to endanger our most vital social needs and ultimately to imperil our very survival, individual and collective.

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Nothing will meet this self-challenge of mankind, it seems to me, but careful planning, nothing but an austere reduction of some initiatives which have too free and dangerous a sway, at this time. It is hard to estimate whether the economic or the political obstacles are the greatest. In some parts of the world it is firmly believed that North American political power is levered by finance and industry (mythically referred to as "Wall Street" and "Big Business"). Our image of ourselves is quite different, of course, and our view of some of our neighbors is strongly colored by apprehensions of the effects of state control.

Whatever our choices as private citizens in these political alternatives, it may well be that our most urgent duty is to enlighten ourselves and others on the technical aspect of modern man's exploitation of the universe so as not to permit an unwarranted use of scientific findings. We have the knowledge and training (if not always the curiosity and motivation) that allows us a better grasp than others have of cosmic and genetic gravitations. The milky way and the DNA spirals, natural selection and food-chain cycles, are in the background of our emerging science of ecology.

A few ecologists, like you Frank, since the beginning of their career have not been content with an impatient treading of unbroken ground, challenging established principles, and tentatively substituting new ones; they have made a repeated attempt to apply ecological discoveries to human affairs. (Of course, we have as yet no definitive synthesis of human ecology: most attempts being heavily weighted to conservation, sociology, or economics.)

But certainly a heavy burden rests upon our shoulders to interpret environment under all of its aspects--a burden as heavy as that of the nuclear physicists who are providing new means of harnessing and releasing energy. In fact, it is the very same task, as we are beginning to see more and more clearly (have you read David Gates' excellent little book?[4]). Our basic tenet, I suppose, is that no rational exploitation of the universe around us (or more immediately of the vegetation around us) is possible if we do not understand the shifting balances of living communities. It is neither here nor there whether some of us might wish to restore the world to its pristine equilibrium, or whether we are content to preserve some examples thereof as museum pieces. If we do consent to engage into irreversible processes, we must do so with our eyes open, not unwittingly.

Rachel Carson makes this clear, I think. She has painted a picture of the world as we have transformed it and she has pointed to the direction in which we are headed. The "spray around us" (surely it is you who have coined this phrase) has suddenly become visible. Miss Carson writes so well and so clearly that no one may misunderstand. That lovely voice, however, has the harsh accents of Cassandra.

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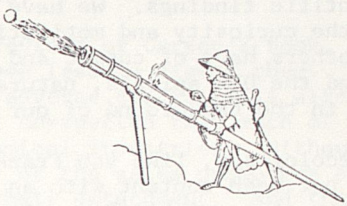
To escape our doom what can we do? Do you really believe that biological control can work on a large scale? By what margin will our standard of living be reduced if we substantially curtail spraying? What answers does vegetation management offer? What is the conscience-stricken gardener to do, when nozzle in hand, he pauses before applying DDT? Can we really teach him to control weeds by other means? Do we now have that kind of knowledge or must we make a strong plea for more research?

Cordially,

Pierre Dansereau



PIERRE DANSEREAU: Assistant Director (Botany) of The New York Botanical Garden (at time of letters, now living in Montreal). He has carried on field work in the Arctic and the Tropics and many parts of the temperate zone, published several papers on biosystematics and vegetation study, and a book entitled *Biogeography, An Ecological Perspective* (Ronald Press, 1957).

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[1]Rachel Carson. Silent Spring. Houghton-Mifflin, 368pp.1962.

[2]Frank E. Egler. Selective application of selective herbicides in the study of vegetation development. Science, 115(2978):98-99. 1952.--Science, industry, and the abuse of rights of way. Science, 127(3298):573-580. 1958.

[3] Pierre Dansereau. Resource planning: a problem in communication. IN: "Science and the Future of Mankind," W. Junk, Den Haag, pp. 131-140. 1961.

[4]David Gates. Energy exchange in the biosphere. Harper & Row Biological Monographs, 151 PP. 1962.

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Robert R. Humphrey to Pierre Dansereau

February 28, 1963

Dear Pierre:

Your request that I contribute to "Conversations on Ecology" for The New York Botanical Garden's journal came to me as a pleasant surprise and a flattering one. I have been working for so long on the applied side of ecology that I sometimes wonder whether the "pure" ecologists consider me any longer as one of the clan. I, like Frank Egler, Heinie Oosting, and Rex Daubenmire, was one of Cooper's students at Minnesota. Many years have elapsed since we were there together, and we have all gone our various ways. Only I, however, gravitated into the applied side of the field. That gravitation came as a matter of economic necessity and a job that was available in the depression year when I finished my graduate work.

As applied plant ecology is essentially synonymous in my mind with vegetation management, I am more than pleased to be asked to comment on this topic. You and Frank Egler in the first two "Conversations" have commented on Rachel Carson's Silent Spring. Others have done likewise, often from a highly subjective point of view. This topic has been worked over sufficiently; I feel I should devote my limited space to other topics. In particular, as a member of the University of Arizona Department of Watershed Management, I should like to comment on the topic of watershed management.

This whole rapidly growing field will become increasingly important as our human population and that of the world continues to grow. The requirements of an increasing population put an ever-increasing pressure on production or efficient utilization of the natural renewable resources of our watersheds.

Perhaps before I go any further we should define a watershed. Webster's New Collegiate Dictionary definition is brief and explicit: "The whole region or area contributing to the supply of a river or lake." Thus, a watershed is a physiographic unit. That such an area should be defined as a unit results merely from the fact that water runs downhill and, in the absence of factors that counteract gravity, will always run downhill. Yet there is inherent in the very term watershed a potential and very often a real misconception of the concept watershed management.

I suppose I should not, but nonetheless I do continue to wonder at the number of scientists who -- without much thought -- take it for granted that management of a watershed automatically implies management as a means of affecting the water of that area. I would make the point that this management may not be designed to affect

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the water resource in any degree. True, most of the management practices that may be applied on a watershed will affect the water of the area in some way, but these effects may be merely incidental to the principal reasons for the management program.

Let me enlarge by giving my concept of watershed management. It might be argued that a physiographic unit cannot be managed, but that the resources of such an area can be. For present purposes I shall disregard minerals, which are largely non-renewable, and talk only about the renewable natural resources. On most wildland watersheds these would seem to me to be vegetation, animal-life, water, and recreation. The behavior of the water usually depends largely on how we manage the vegetation. How we manage the vegetation often depends on how we manage the animal-life, including both native or introduced wild animals and domestic livestock. So, perhaps merely to have some point from which to develop an idea, I propose that in actuality we manage the natural resources of a watershed and that in managing these we effect some degree of control over a physiographic unit but that we do not manage the unit as such.

Thus, the timber resource of a watershed is managed by the adoption of proper cutting practices, the forage resources by the application of sound grazing practices, the game resource by the use of wise harvesting, and the recreation resource by these and many other means. Finally, the water (and other) resources of a watershed may be affected by management of any of its other resources. I have not forgotten the engineers; they have their water-affecting techniques also.

In summary then, where do we stand? First, watershed management is not synonymous with management of water on a watershed. Second, perhaps we do not manage watersheds at all but only the natural (primarily renewable) resources of a watershed. Third, by the management of one resource we may affect or indirectly manage another.

On a quite different tack, may I suggest that ecologists are in a better position than the devotees of many other disciplines -- assuming that ecology is a discipline -- to develop classification tools that are useful in vegetation management? I am thinking here of the classification of range lands on a basis of condition. Range survey techniques were revolutionized some twenty-five years ago when the emphasis was shifted from classifying range vegetation as a static entity to a recognition that the vegetation (and erosion) on a site could be used as a means of determining the condition of that site. The idea itself, of course, was not novel. Sampson, Clements, and others had been talking and writing about it for a long time. The new feature lay in a shift of emphasis to the application of ecological -- primarily successional -- principles to the management of range lands and the development of specific range-conditions-rating techniques.

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As with the development of concepts and techniques generally, this one went through a formative period during which there were minor modifications in some of its features. Although emphasis had always been on maximum forage production as a basis for defining condition classes, there was some difference of opinion on the degree to which successional stages should indicate condition, that is the extent to which the initial stages in a sere should be accepted as representing the poorer condition classes, grading upward to a climax synonymous with excellent conditions.

The need for a practical classification that would indicate relative production has continually argued against so high a degree of correlation between pure ecology and its practical application. As a consequence, although it is recognized today that in general there is a correlation between successional stages and condition classes, many exceptions are recognized. Ranges that once supported perennial grasses but that today are characterized largely by annual species, as in the foothill ranges of California, may be classified as in good or excellent condition on a basis of present-as-related-to-potential production. Or ranges such as the desert grassland of the Southwest that once supported a subclimax of perennial grasses under a regime of periodic fires, but that today more often support the climatic climax of trees and shrubs with a relatively sparse understory of grasses, are classified as in fair or poor condition. These kinds of application seem to me to represent a flexibility in the application of ecology which is highly desirable. This lack of rigidity permits a more extensive use of ecology to further the management of our renewable resources.

Land management out here in Arizona, as in many places, is taking the form of millions of dollars being spent in an attempt to undo the effects of many years of man's mismanagement of these lands. Ignorance and cupidity make a bad team, and most of our land problems out here have resulted from these. Invasion of thousands upon thousands of acres of former grasslands by mesquite, and the addition of other thousands that have been similarly invaded by juniper, could have been avoided had there been adequate cognizance of the changes which were taking place and the reasons for these changes. Man, in his all-seeing wisdom, saw fit to check the fires which, as a natural part of the environment, had kept these trees in check. As a clincher he stocked the ranges with many more livestock than they could safely carry. The rest is history, written in terms of grasses replaced by woody "weeds," of drastically reduced carrying capacities, of unnecesary erosion and silt-filled reservoirs, of reduced soil-moisture infiltration, and finally of the expenditure of millions of dollars in an attempt to begin to undo some of these results of ignorance and cupidity.

Well, Pierre, maybe I have said enough. In Mexico they have a saying -- "En boca cerrada no entran moscos." Your "Conversation" will elicit many responses, some profound, some "down to earth, earthy," and some neither. I do not aspire to the first; I hope my few comments are not relegated by too many to the last.

Sincerely yours,

Robert R. Humphrey

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Luna B. Leopold to Pierre Dansereau
Washington, D.C., April 26, 1963

Dear Pierre:

The "Conversations of Ecology" have mentioned the pesticide problem, and in such discussion it is easy to lose sight of the basic philosophic view which is an undercurrent in Miss Carson's book. I should like to expand on that philosophic premise and examine some of its implications for planning vegetation management measures as well as other measures for resource development.

Crowning a rounded hill and floating on the ground swell of New England in full fall color is a slim white shaft, pointing upward. The church spire symbolizes the raising of eyes aloft. It therefore reminds us of something higher than the mundane toil of the commonplace.

The little white church stands alone on its hill, flanked by native oaks and facing a little grassy sward. Whereas the spire points upward toward things of higher order, the village green also is a symbol -- a symbol of elbow room. And if a weary businessman feels pressed or smothered by the day-to-day cares of the economic world, he can lift his eyes and see that there is still about him room to breathe and to let a weary soul expand.

So also in the Spanish-speaking communities of the Southwest, the long line of hitching posts before the mercantile houses seems to keep the economic turmoil from completely filling the room held open by the plaza, whose cottonwoods reach toward the blue sky. But how many of these plazas still remain? In La Junta, Colorado, for example, the cottonwoods are gone and no strip of grass remains. The windowless face of an air-conditioned office building looks from its four stark sides over the little storefronts where once the cowboys lounged. In Santa Fe, New Mexico, the old Federal Building, centered in a green oval of grass, has given up many of its cottonwoods and half of its open space to a new Post Office. Something has been lost. The balance sheet of economics undoubtedly showed that such a valuable piece of property in the center of town could not indefinitely be maintained as a wooded open place. But what appears to be a credit in the balance sheets at the town hall is a loss splashed in red ink before the eye of any discerning man.

To whom was the plaza in the southwestern village a thing of value? What was the nature of this value? One would suppose that if the majority of citizens had thought it a necessary part of their lives, it would not have gone under before the bulldozer of progress. Yet conversation with nearly any citizen indicates that he regrets the decision to give up the plaza for a new and ugly town hall.

Esthetic values are often lost, not because it is the will of the majority to give them up, but because the issue placed before the public is not in such form that their wishes on such a matter are directly expressed. The wheels of administration have usually turned too far toward a particular decision before the real desire of the people becomes known. Even the elected representative is usually faced with a decision to build or not to build. Very seldom

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is even he asked the question, "Is this something you want to give up?"

With this background we can begin to visualize one aspect of planning which has been, if not overlooked, at least given short shrift. Planning commissions, we are usually told, are bodies whose task it is to determine the best use of available resources. The duties of the planning commission are usually discussed in far greater detail than the definition of "best use."

Restricting ourselves now to resources, we may ask what we mean by "use." In practical terms a list of possible uses for a resource includes only those whose results can be evaluated in monetary terms. The idea of non-use is usually, therefore, excluded. Failure to use a resource can be considered foregoing a monetary gain and therefore would be debited as a monetary loss. By the same token, existence of scenery is not thought of as a use of landscape. On the other hand, maintenance of a scenic site for the purpose of herding the public in and out at two bits a head would be a very profitable use, and the usefulness of the scenic spot would then be measured by the ticket sales.

Then it is necessary to define what we mean by "best use." It immediately becomes obvious that we must ask-- best use for whom, and in what way is it best even for them? Again, "best use" means the high est monetary return.

If one thinks this is far-fetched, he need only inspect the administration of national parks or the development of flood-control plans to take two somewhat dissimilar examples. A growing proportion of an increasing population, we are told, wishes to see the national parks. The success of the parks is demonstrated by the great increase in the number of visitors. That the quality of the experience of each visit has been materially reduced by the competition of mass use appears to have been all but overlooked.

Flood control offers another type of example. The construction agencies of the Federal Government, by the Flood Control Act of 1936, are authorized to provide flood protection for any area in which it can be demonstrated that the benefits exceed the costs. What benefits and what costs? Clearly, it is very difficult to assess the indirect and the non-monetary benefits and costs. Therefore, simple and straightforward schemes are used by which the direct cost is measured by the engineering and associated works, and the benefits are computed in terms of direct flood losses which were prevented by these measures. If a few serene and historic valleys are flooded, the losses are at best recounted in a paragraph in a report, but they have no real effect on the decision to build. If some persons are displaced from the land their grandfathers tilled, the costs are listed only in terms of the money necessary to buy them out or to place them on new farms. That there was some cost to their souls is not a matter of economic concern.

With these examples we may then consider another aspect, or perhaps a dirrerent purpose for planning commissions. A planning unit might best assume the job of identifying values which, to be maintained, must be protected from the effects of ordinary expansion of use and development. We need not fear that the insatiable hunger of the Machine Age will fail to develop resources when the economic setting makes such development profitable.

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If planning were to be viewed as the protection of the quality of the landscape, rather than as a publicly supported chamber of commerce to speed development, then it would be necessary to begin asking ourselves the question, "What kind of land do we want to live in?" This is the experiment which I suggest is in need of trial. What are the limits of development beyond which the people themselves would not care to go regardless of some slight increment of monetary gain? What in their community life do they want to protect and maintain? What aspects of the quality of living have that particular measure of esthetic value which a given community would not care to trade for economic expansion? Such questions could be asked of town councils, of civic groups, of business associations.

Presumably in considering the answers to these questions, most citizens would hope, and rightly, for a reasonable expansion. But they would draw a limit when a slight increment in the income so derived would jeopardize certain aspects of their surroundings which they consider essential to their souls rather than to their pocketbooks. Interestingly, these kinds of questions have, to my knowledge, not been specifically directed to those groups of citizens and administrative bodies most concerned.....

Sincerely,
Luna B. Leopold

Pierre Dansereau to Frank Egler, Robert Humphrey, and Luna Leopold
New York, July 26, 1963

Your three letters light up very different facets of the emerging science of vegetation management, and I wish to thank you for your contributions. I shall use them as stepping stones rather than milestones and attempt to take off in all three of the directions you have pointed to, only to boomerang back to our common centre, which I assume to be a preoccupation with our own contribution, as scientists of a certain fraternity, to our society as a whole.

I too, Frank Egler, will refrain from tossing bouquets (although I should probably be ashamed to admit that I am more prone to enjoy the "toss-effect" than you are!). I do feel bound, however, to look back upon your published work of the last two decades, and although you would be reluctant to serve as a model for anyone, young or old, I do think your endeavours are exemplary. Granted also that we would have our ideas rather than our behaviour stand for judgement, I refuse to separate the man from his works, as I have had occasion to say publically at some length, recently.1

About ten years ago, in St. Louis, in the always redoubtable presence of students, I asked you why a man so obviously gifted for the intellectually more rewarding risks of theoretical speculation spent so much time dabbling in rightofways, herbicides, and generally educating engineers and vice-presidents of industrial companies whereas his fellow-ecologists were so much in need of the elucidations and thrashings that you had by then administered. Your pursuit of the philosophic implications of the study of vegetation,[2] and, in many of your later publications, your examination of the psychology of the "ecological approach" should have acquainted us

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much better with ourselves. Not very much happened until you provided an unmistakable application of these principles to current practice.[3] This frontal criticism, frankly labelled as such, could not be ignored, whereas the demonstrations you had given in your Oahu[4] and saline everglades[5] papers are maybe only now achieving full recognition.

Why, I asked, did you bother with herbicides when you could strike much higher? I am sorry to report that I do not remember exactly your answer at that time, but I think it is now explicit (and eminently readable) in one of your most recent contributions.[6] If I venture to catch this dangerous creature by the tail, I find that it says, in the end (pp. 302-303): "Too many men of knowledge are shrinking from lofty goals in favor of the safe and the compromising. Too many men of knowledge fail to fit that characterization of Edmund Burke (1729-1797) that 'Those who would carry on great public schemes must be proof against the worst fatiguing delays, the most mortifying disappointments, the most shocking insults, and, worst of all, the presumptuous judgment of the ignorant upon their designs.' There are not enough Communicators of Biologic Knowledge in America,...whereas the Communicators of faulty, inadequate and erroneous knowledge are frequently usurping the field, against the public interest."

Although I keep my distance from Burke, I can only consider this a convincing answer to my question of 1952. If we have faith in our mission as scientists (and if we do not, we are mere dilettantes), some of us must do without interpreters and carry the message ourselves and unseat the false prophets and the exploiters of science.

The choice you have made, Robert Humphrey, although you modestly say it was dictated by circumstances, could not have been a valid one if you had not retained your faithfulness to pure ecology whilst dedicating your everyday efforts to range management. Communication is a two-way affair, and it is workers-in-the-field like you who have kept the lines open. An active feed-back of practical experience to pure science demonstrates the great need that vegetation schience has of responding to the claims of the human population, at the same time analyzing objectively the effects of man's interference upon the landscape. (The voluminous Wenner-Gren book,[7] to which both Egler and Leopold contributed, "made the point," back in 1956, and it continues to provide us with valuable data and live ideas.)

Your adoption of the ecosystem as the basic unit[8] is in recognition of the fact that ecology (and therefore vegetation study) is not entirely a biological science, but lies at the point of confrontation of physical (geological, pedological, meteorological) and biological forces at various degrees and in various states of conflict and harmony. Certainly the pressure of range managers, foresters, engineers, and agriculturists in their search for objective means of evaluating yield and predicting productivity should have led the pure ecologists long ago to devise methods of measuring the potential of vegetation. A properly ecological perspective on productivity[9] has been as slow to emerge as had been a non-agricultural classification of soils, almost two generations ago!

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You state very truly, moving to yet another plane, that "a physiographic unit cannot be managed" (and I do not know whether Luna Leopold agrees with that[10]), but "its resources can." But how? Does our present knowledge of the dynamics of the landscape provide us with the standards of predictability that make for "scientific" management? You say in the preface of your book[8] that "range ecology is not range management" and you hold fast throughout to that distinction, exploring many unsolved questions, such as the relation of a high dynamic status in vegetation (such as "climax") vs. productivity. Where range management is involved, we actually move into another sphere: demography, sociology, politics.

And such is the question which you pose, Luna Leopold, in addressing yourself not so much to our colleagues as to the community of citizens. They may well ask us, with the immense respect which is reserved for experts: "What is the best use of this landscape?" And we must ask them right back, as you have: "Do you value a row of trees more than a drugstore? Do you prefer a homestead to a dam?" Or in other words: "Will you walk another block for your aspirins? Do you mind paying a little more for your electricity?" Of course, what is to be saved does not always have the dramatic appeal of the Egyptian temples that are menaced by the Aswan barrage on the Nile! But the great sacrifices which our democracy makes every day in favour of the "little man" are offered on the same altar, are they not?

Conservation deals in values essentially, almost exclusively. How right you are to say that we must first decide what we cherish in our environment and then ask ourselves how much it will cost, what else we might have to give up in its favour! Not many engineers speak this language: in their own blend of humility and arrogance they are often too ready to be good soldiers who loyally offer their technical services only. It is not surprising that you, the son of Aldo Leopold, should have perceptions that a slide-rule cannot measure. And it is not surprising either that you should be in a position to pick up one of the unanswered challenges of environmental study: I refer to physiographic ecology, foreshadowed by Fenneman and by Lucy Braun and now put to the test by such men as Strahler and Wolman with whom you have collaborated. Your recent address on ecological systems and the water resource[11] restates this very forcibly.

The challenge to our minds is surely not to be met by moving backward to a more pastoral way of life which is incompatible with our present world. The emergent African nations offer us a spectacle of awareness and enthusiasm, and of generous acceptance of the contemporary requirements. It is my conviction that we have much to learn from them in the management of our affairs. Black Africa has already taught us a thing or two about the dance, and sculpture, and music. It will teach us something as well about human relations, if we show ourselves capable of the humility which it takes to break out of our cultural bonds and to free ourselves from the numbness of exoticism.

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I do not apologize, dear friends, for rambling as I have from the realm of philosophy to the mystery of the African scene. These conversations are not intended to develop formal theorems. I hope you will feel moved to make further contributions in the same vein and in the same mood.

Yours sincerely,

Pierre Dansereau

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1 The Barefoot Scientist, an inaugural address at the dedication of the new Laboratory of the Institute of Arctic and Alpine Research of the University of Colorado; Colorado Quart., 12(2):101-115, also Inst. Arctic & Alpine Res., Contrib. 10:101-115. 1963.

2 F. E. Egler. Vegetation as an object of study. Philosophy of Science, 9(3):245-260. 1942.

3 F. E. Egler. A commentary on American plant ecology, based on the textbooks of 1947-1949. Ecology, 32(4):673-694. 1951.

4 F. E. Egler. Arid Southeast Oahu vegetation, Hawaii. Ecological Monographs, 17:383-435. 1947.

5 F. E. Egler. Southeast saline everglades vegetation, Florida, and its management. Vegetatio, 3(4-5):213-265. 1950.

6 F. E. Egler. On American problems in the communication of biologic knowledge to society. Dodonaea, 30:263-304. 1962.

7 W. E. Thomas, Jr. (ed.). Man's role in changing the face of the Earth. Wenner-Gren Foundation for Anthropological Research and the National Science Foundation, University of Chicago Press, xxxviii + 1193 pp. 1956.

8 R. R. Humphrey. Range ecology. Ronald Press Co., New York, v + 254 pp. 1962.

9 R. L. Lindeman's contribution. The trophic-dynamic aspect of Ecology (in Ecology, 23(4):399-418. 1942) did not immediately start the ball rolling. More than anyone else's no doubt, Howard T. Odum's research of recent years has brought us closer to a grasp of this aspect of vegetation dynamics.

10 See his chapter in the Thomas book quoted in note 7, and also his book in collaboration with Thomas Maddock: The flood control controversy. Ronald Press Co., New York, xiii + 278 pp. 1954.

11 Luna B. Leopold. Ecological systems and the water resource. Geological Survey Circular 414:21-26. 1960.

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Frank Egler to Pierre Dansereau

Norfolk, Conn., September 4, 1963

Dear Pierre:

I have read with great continuing interest the two fine recent letters in this series, III by Bob Humphrey on watershed management, and IV by Luna Leopold on planning commissions and the conflict between long-term cultural values and short-term utilitarian values. How significant it is that vegetation management cannot restrict itself to vegetation! Vegetation is not only the topmost keystone of an ecosystem-ology (call it "ecology" if you wish, but such an ecology is a far, far cry from the "plant ecology" taught three decades ago, and still being taught in too many places). Vegetation is also the foundation stone for the conservation and management of renewable natural resources.

Now I read the manuscript of your own letter, V, and your invitation that I submit another contribution.

In trying to harness my scatter-brained thoughts of the moment, I feel it might be reasonable in this letter to stress the subject of communication of vegetation management knowledge, with emphasis on two case histories which I have specifically studied. The professor is a communicator, in that he communicates to his students in the classroom. I have long considered, however, that such communication is one of the easiest of human pursuits, even without university tenure. The professor is without competition on his campus; his charges are usually empty pitchers; and when not empty, always willing to slosh back the same material for the sake of grades and degrees. To the contrary, communication of vegetation management knowledge to society at large, if in the face of such opposing unwisdom as may be disseminated by radio, television, and the press, by advertising, and by the public relations departments of industry, is more than a test of one's powers as a communicator. It is a test of the fundamental intelligence of human society. It is the obligation of every vegetation scientist to make his voice heard. A few days ago, I opened a short address with a thought reputedly by Abraham Lincoln. (Can anyone identify it for me?)

To sin by silence
When they can protest
  Makes cowards out of men

Among biologists, the most unsilent and courageous man I know is a woman -- the author of Silent Spring. And at the back of the book are fifty-five pages of references to scientists, most of whom have sinned by silence. We have failed to communicate -- where she has succeeded.

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But a few comments before my two case histories. Firstly, the problem of the pure versus the applied scientist. I note that Bob Humphrey, referring to the odd era when W. S. Cooper had to put up -- all essentially at one time -- with him, me, Oosting, Daubenmire, and Buell, indicated that he alone went into "applied" ecology. Whereas you, Pierre, josh me for disregarding the rewarding pursuits of the pure in science, while I piddle with herbicides, trying to educate such vegetational uneducables (my term, not yours) as engineers and vice-presidents of industrial corporations. It is quite true that the pure criticize me for being impure, and the applied criticize me for being misapplied. No, there is no inconsistency in my stand. (Anyway, I always considered consistency a virtue only for those too unintelligent to know when to be inconsistent.) It is quite true that when one holds a position the success of which is measured in terms of timber, or forage, or irrigation water, the world calls him an "applied ecologist," and when he holds a position measured in terms of cultural and intellectual rather than utilitarian values, he is a "pure ecologist." On the other hand, I have never made any such distinction for myself. (I agree, however, that many of our applied scientists are not scientists. They are "applied technicians," routinely following a methodology learned in school, or from salesmen.)

Secondly, you honestly ask me, Pierre, "why...did you bother with herbicides when you could strike much higher?" I can answer rather simply, for the first time in print. At the end of World War II I found myself retiring, commencing I should say, and face to face with several acres of unmanageable brush. In empirical desperation I bought some 2,4-D and sprayed the things. They turned brown. Ray Hirt (then head of botany, Syracuse Forestry) visited me, thought I had something worth publishing. I told him that any fool could spray plants and watch them brown. "Yes," he said, as I recall, "but not every fool would publish." I published, and as a result I obtained support for my research for five years. The donor was interested not so much in my data, but in my ideas on stable vegetation types (and I still have a stable peppermint patch to prove my point). By that time, other challenging values had arisen. I found the selective application of selective herbicides the most extraordinary "tool" yet available for manipulating plant-communities for basic research, and thereby testing conventional "plant succession" as it occurs in textbooks, not in nature. I found that reasonable use of these herbicides could revolutionize the vegetation management of more than fifty million acres of right-of-ways and roadsides, at lower costs and with higher conservation values (though an intra-industry closed circuit of communication has so far prevented the adoption of this scientific common sense, despite the Public Interest). I found that since insecticides are used to modify the insect peaks which modify the forests, and since other zooicides are used to modify the predator populations which modify the rodent populations which modify the vegetation types, the entire pesticide problem is pertinent, and thus Dr. Rachel Carson's recent book is second to none in its importance to vegetation management. This is why I bother with herbicides. (Besides, it is a lot of fun, and is an outlet for my urge to meddle with nature, to counterbalance my scientific and cultural interest in Natural Areas. Natural Areas, also, are an extremely important "tool" in vegetation management.)

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The first of my two case histories on communication concerns ragweed. Ragweed often occurs on roadsides. Ragweed often causes hayfever. Thus ragweed control has become a profitable industry, especially if associated with a planned obsolescence, i.e., if the control only controls, and does not permanently eradicate ragweed. Now there is no disagreement among botanists on ragweed. The plant is a "pioneer" species, growing on poor or bare soils, often dominating other such pioneers. It germinates continuously through the season, and seeds remain viable in the soil for many years. It is "successful," as plants go. Furthermore, the Ragweed Community is successful on -- among many sites -- the Ragweed Belt of many highways, that narrow band of salted and oiled rubble at the margins of our roads. A spraying with an herbicide does kill the ragweed, together with its competitors such as plantain, opening more soil to more ragweed, to more spraying. Ragweed is not a "disease" in itself. It is a "symptom" of a site disease. The best way to control ragweed is to eliminate the Ragweed Belt; and this is being gradually done by highway-men, though I suspect not purposively. More and more highways are being constructed with berms and curbs, which separate the pavement from a deep-soiled, well-vegetated area. No strip of rubble -- no ragweed.

In 1958-59 I made a survey of two hundred "social units" concerning roadside ragweed control knowledge.[1] The social units included federal, state, provincial, county, and municipal governments, industry, and citizen organizations. The knowledge was segregated as blue line (the scientific information mentioned above) or red line (repeated spraying of the ragweed belt). Communication itself was recognized as arising from, or going to, various social units, either actual or as recommended by the units themselves. This information was charted, and I need say little more than that the red-line information overwhelmingly dominated, often arising in the industry-sustained Weed Control Conferences, moving in and out of government agencies, parroted by many citizen groups, sometimes going round and round, doing little more than chasing a pointless tale. Blue-line information? "To sin by silence..." Where are the communicators?

The second of my two case histories on communication concerns the gypsy moth. Now this notorious pest was introduced a century ago with uproarious results. I have seen hundreds of acres of oak forests as bare in midsummer as in midwinter. A dozen or more parasites and diseases were successfully introduced. These and native species have now reached an adjustment with the gypsy moth so that peak infestations are naturally reduced, though not without the violent disruptions which are common to nature. In the meantime, DDT came into use. Profit-making industries combined with the non-ecosystematists (foresters, entomologists, horticulturists, agriculturists, who are concened only with a few strands of the many-stranded ecologic web) to spray our forests relentlessly, affecting the ecosystem far beyond the points of spraying, far north of the Arctic Circle, and far out to sea. Other controls are in the offing. Timber benefits are not to be confused with total ecosystem benefits.

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In 1962 I made a survey of all pertinent "social units" in a northeastern state, concerned with gypsy moth spraying. These units included state agencies, industry, citizen groups, and the actual towns that voted to spray, or not to spray. Blue-line information arose in almost all citizen groups, but failed to communicate itself. Four of five state agencies were essentially blue line, but did no communicating. One stage agency was two-phased: it had a slender blue line, beamed winningly to the blue-line organizations; it had a massive flow of red information -- and the only such red on the entire chart -- directed effectively to the towns, with horrifying warnings that "The caterpillars are coming. If you do not spray ..." Blue-line information? "To sin by silence..." Where are the communicators?

In concluding this epistle of miscellany, focused on problems of communication of vegetation management knowledge, I should like to give glancing recognition to questions which are raised by items currently in the news, of interest to both scientist and layman. For example, annual meetings of the Ecological Society of America have just been concluded, held in conjunction with those of the American Institute of Biological Sciences and affiliated societies. The E.S.A. is the professional society in America that should be unsilently out in front on the pesticide issue. Yet at the time of this writing, its journal Ecology has not yet published a review of Silent Spring (though one is in press). The Society has some sort of committee on public relations, and a subcommittee on environmental pollution has been proposed, but to my knowledge it is still essentially undecided as to whether such committees are "proper" (catch the innuendo in my voice?) for proper ecologists. While the E.S.A. prides itself on its propriety, the non-ecologists are making hay, and with more than herbicides. For example, Part III has finally been published of the National Academy of Sciences--National Research Council report[2] on pest control and wildlife relationships. The first two are widely recognized as a whitewash of the problem. This third, on needed research, is a very strange bulletin, very un-specific in details, offending no one, and reading very much like a term paper by a mediocre high school student, discussing varieties of possible research. We must remember that this committee is largely financed by the chemical industry; he who pays the piper has always called the tune, even if under the prestigious emblem of the HAS--NRC. An odd and interesting attribute of this committee (which will surely be noticed by our hammer-and-sickle-bearing criticizers) is that nothing is published without the unanimous consent of all members! The effect is very much like the Russian veto in the United Nations, except that in the UN both minority and majority opinions are freely communicated to the public. Not so from this top American scientific committee, on a subject which has called for a special Presidential review. Did you ask about the freedom of American science and scientists?

Much more could be said. There is the situation where an agricultural experiment station (chief government pro-sprayer in the state) holds a field day and invites as its major speaker and expert on pesticides, a man whose qualifications are primarily in public relations for an industry. The newspaper report of his talk

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was headlined "Pesticides aren't Menace to Health of Human Beings." There is the situation in a state university college of agriculture which has just established a "Department of Environmental Science." It will be interesting to see how agriculturists, with their notoriously short-term non-ecosystem-oriented philosophy, will communicate to the general public in the name of "ecology." It will be interesting to see the reaction of another part of the campus which holds a department of botany which carries on the teaching of plant ecology. And lastly, there is the situation in the nation's newspapers a few days ago when an Associated Press release received such headlines as "Scientist takes issue with Carson," and "Scientist at odds with author; says weed killers necessary." The scientist is a plant physiologist (of a field far removed from ecosystem-ology); the effect of the news release is to put him fairly and squarely with the chemical industry, with their eminent voices, the Doctors Baldwin, Darby, Decker, Stare, Westcott, and White-Stevens. On close reading of the article, however, we find absolutely nothing that was not explicit or implicit in Silent Spring itself!

It will be interesting to see whether the ecosystematists communicate to the general public. It will be interesting to see whether the general public will have the intelligence to listen to the ecosystematists when they do speak. The last quarter century has not made an optimist of me.

Sincerely,

Frank Egler

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1 Frank E. Egler. Roadside ragweed control knowledge, and its "communication" between science, industry and society. Proc. IX Internat. Bot. Congr., Montreal 1959, Vol. IIA (Abstracts), pp. 10-11. 1959. Also, In: Recent Advances in Botany, Univ. Toronto Press, pp. 1430-1435. 1961.

2 Pest control and wildlife relationships. Part III. Research needs. National Academy of Sciences--National Research Council Publication 920-C, Washington, 28 pp. 1963.

Peter Wardle to Pierre Dansereau

Christchurch, New Zealand
November 1, 1963

Dear Pierre:

Many thanks for your kind invitation to join in your "conversation." I shall leave discussion of ecological aims, principles, and philosophy to your more experienced contributors, for I prefer, and I think you intend me, to consider facets of applied ecology

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which are characteristic of the New Zealand setting. In New Zealand, as in few other places, man has brought very different floras and faunas abruptly together. On one hand, there is the native biota, evolved during sixty million years of isolation, highly adapted, specialized, and including many archaic survivors (note Tmesipteris and Sphenodon). This biota includes forms which can be exploited by man, such as timber trees and game birds, but there are few plants and animals which seem suitable material for cultivation or domestication. On the other hand, there is the vast assortment of plants and animals which man has gathered around him, deliberately or accidentally, during some five thousand years of developing civilization. What ecological lessons, and what problems, arise from this confrontation?

It all began, in a relatively small way, when the Maoris reached New Zealand about one thousand years ago. They introduced only a few plants and animals, since, obviously, only a few could survive transplantation from tropical Polynesia. Even their most successful crop, sweet potato, could be grown only under the most benign conditions; hence their agriculture wrought little disturbance. Two animals, the rat and the dog, were successfully naturalized (though both since have been supplanted by European kinds), and these may well have initiated the decline of any indigenous birds, which continues to this day. The Maoris also started extensive fires, and in so far as this was intentional, it was to extend the range of bracken, which has edible rhizomes, and probably also to overcome moa, the giant flightless birds which they exterminated. Altogether, they destroyed something like a third of the primeval forest and caused its replacement by grass, fern, and scrub, a historical event not without bearing on vegetation management today.

The confrontation became acute with the arrival of European settlers from the early nineteenth century onwards, with their unlimited recourse to foreign plants and animals, and their ever-increasing power to modify and destroy the biota and even the landscape itself. Today, a visitor can travel the length of the country and see little of native vegetation; lush pastures of European grasses and plantations of North American conifers predominate in the settled areas. Yet, in fact, native vegetation, showing every degree of modification, occupies two-thirds of the area of New Zealand. Let us look at some examples of vegetation, beginning with the lush pastures just mentioned.

Some forms of cropping -- for example, pineapple farming in Hawaii-- have reached a degree of technical perfection, by which a sequence of carefully planned operations leads to a highly predictable yield. In pastoral farming, where production of plant material is merely an intermediate step, such perfection has never been attained. But it is closely approached with improved pastures in New Zealand. These are grass-clover mixtures established on land supporting, before improvement, usually only poor pasture or weed growth, but brought to a high level of fertility through skillful management. Clover supplies the community with nitrogen, but artificial manures are also required, especially calcium "superphosphate" to supply the special demands of clover for phosphorus and sulphur, and lime to maintain suitable

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chemical and microbial balance in the soil. If livestock shows sickness because of a shortage of certain trace elements -- usually cobalt or selenium -- these, too, are supplied. Destructive root-feeding larvae have been controlled by insecticides, but (echoes of Silent Spring) the use of these chemicals is now under review. Cattle and sheep not only supply the economic end-products of meat, wool, milk, and hides, but play an essential role in maintaining the high productivity of the system in that they return nutrients in excreta and graze off top growth of grasses which otherwise would intercept light and induce stagnation.

Indigenous plants play no part in improved pasture. This is in contrast to vast areas of less fertile or hilly land, where settlers sought to burn native vegetation of forest, scrub, or fern, and to establish "English" grasses in the ashes. Instead, weeds took over, the most successful being the native manuka shrub and bracken, together with adventives like blackberry, gorse, and the Australian Hakea. Some of this land has been abandoned to revert to forest, and some is being converted to high-quality pasture through intensive farming techniqes. But most is repeatedly burned and maintained as lean pasture in which manuka and bracken persist, by virtue of the former's fire-resistant seed capsules and the latter's deep-lying rhizomes. Some eighteen years ago a lethal scale insect, probably self-introduced from Australia, began to kill large areas of manuka. This event was regarded with considerable glee by many pastoralists, but not by those who recognize the important role of manuka in soil conservation, nor by foresters who value it as a nurse to forest tree seedlings. However, manuka seems more fortunate than the American chestnut, for young shrubs survive long enough in blighted areas to produce seed, and an immunity may well eventually develop.

Spread over the mountains and valleys of the eastern side of the South Island, in the rain shadow of the Southern Alps, are the "high country sheep stations." These are the cultural equivalent of the American cattle ranch and are likewise dependent on native grasslands. When graziers first occupied the area in the 1850's, they found that the dominant grasses were unpalatable tussocks, and the vegetation difficult for sheep to penetrate. So they resorted to burning, in order to induce accessible, fresh, young growth. This reduced the vigour of the tussocks, and in the driest areas they succumbed altogether to be replaced by desert. Elsewhere, moderately palatable adventive species, such as bentgrasses and sweet vernal, along with unpalatable native species, formed swards between the remaining tussocks to give rather stable vegetation of mixed ancestry.

Finally, what of the New Zealand wilderness -- the "subtropical" forests with tree-ferns, lianes, glossy-leaved evergreens, and stately conifers, the forests of evergreen beeches, the impenetrable mountain scrub, and the alpine grasslands and herbfields? To the inexperienced eye this is pristine vegetation, but in fact nearly all is modified. Much has been modified by man, especially where the giant kauri and other conifers have been logged and the jungle understory left to dominate the forest. Far more extensive is the damage caused by multitudes of introduced herbivores -- deer, goat, hare, chamois, Australian opossum, pig, and more locally, wallaby and thar.

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The impact of these animals on vegetation which has evolved in the absence of mammals raises acute and complex biological problems. For instance, while some communities seem almost immune to damage, others, including some forest and scrub communities which are virtually impenetrable in their virgin state, can be destroyed completely and replaced by erosion scars. The types of damage caused by, say, red deer and opossum are quite different, but different again and far more disastrous is the damage caused when both animals occupy the same area of forest. Certain forms of natural disaster, such as those due to insect epidemics or "wind-throw" of forest, acquire different significance when herbivores destroy the seedlings which normally would repair the damage.

Added to biological problems, such as those posed by the preceding examples, are others which might be termed sociological. On one hand, there are many people who prize the vegetation of the wilderness as a scenic, aesthetic, or scientific asset, at all costs to be maintained in its primeval state. Diametrically opposed are those for whom the most important consideration is the sport afforded by the feral animals. Caught between these extremes, and with special problems such as watershed management, are those who must administer the "unoccupied lands" -- chiefly state forest and national parks. How they must envy their American counterparts, Pierre, whose aim of multiple use -- grazing, recreation, watershed management, forestry, preservation of nature, etc. -- seem so much easier to achieve with vegetation which has evolved along with browsing animals and their predators.

Best wishes,

Peter Wardle

F. R. Fosberg to Luna Leopold

Aboard Japan Air Lines plane
enroute from Tokyo to Djakarta,
November 29, 1963.

Dear Luna:

Time was when one could learn a good bit of ecology -- or plant geography -- on almost any plane ride when the weather was decent. Significant patterns emerge, of which one gets no hint on the ground, when the landscape is seen from the air. However, when cruising in a big jet plane at thirty-four thousand feet, the air must be like crystal for one to see much of anything, and it seldom is so clear, especially in the humid tropics. A wing in the way does not help either. But what matters plant geography when one can fly ten miles a minute? We worship different gods now.

I am addressing this to you, Luna, because so far in these conversations you have made what seems to be the most important observation, or rather, asked the most serious question. We are talking about vegetation management (though I was not sure for a while) which seems to be an aspect of applied ecology. In this, as well as in other phases of applied ecology, perhaps the ultimate question is the one you asked: "What kind of land do we want to live in?" I tried to ask this same question in a less direct, but perhaps equal-

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ly blunt, way in the Bangkok Symposium six years ago.[1] I predict it will be asked more and more often as time goes on and the results of what we are doing become apparent. Perhaps a side effect, or extra dividend, from Silent Spring will be that many more worried people may begin asking your question, which is far broader than the matter of pesticides or of vegetation management.

However, Pierre suggested that I write about vegetation management in the Pacific Islands. First, though, I want to take issue with Frank and his "ecosystemology." I have suggested several times that the study of ecosystems has at least become the proper preoccupation of ecologists,[2] and that ecology might now best be defined as the study of ecosystems. Frank objects because this is different from what he was taught as ecology thirty years ago, and from what some ecologists are still doing and thinking. I wonder if he would insist that the terms "chemistry" and "physics" be restricted to what we were taught thirty to forty years ago? When I had the temerity to suggest, thirty-seven years ago, that man might some day synthesize elements beyond uranium in the periodic system, I was told by my indignant chemistry instructor that this was a serious course, not science fiction. Now I see reviewed a book by Glenn Seaborg on the Trans-Uranium Elements. But we still speak of chemistry and physics. One of the plagues of ecology has been this tendency to invent new words, and bigger ones, rather than refining and improving the definitions of the ones we have. I don't object to coining new words to express new ideas, but they are a burden when they represent only attempted clarification of the meaning of old, well-established words. I suggest that ecology will become more and more the study of ecosystems. I may add that Frank Egler has had a great share in bringing this about.

Now, back to vegetation management in the Pacific Islands. Actually, as one looks at an assortment of Pacific islands, ranging from tiny rocks and bits of coral to the sub-continental Borneo and New Guinea, he is usually not much impressed with the management of vegetation, but rather with man's wide-spread interference with it. In many of the flatter, more favorable places, the natural vegetation has been replaced by cultivated, or at least planted, vegetation. Considerable areas are occupied by sugar cane, rice, taro, sweet potatoes, manihot, coconuts, breadfruit, pineapples, bananas, rubber, and various lesser crop plants. I take it that the management of these is not the subject under discussion, though it is certainly vegetation management. What of shifting agriculture, the widespread slash-and-burn subsistence-cropping of the tropics? Is this vegetation management? Or is it just periodic interference? Is the seasonal burning which is widely practiced in savanna and monsoon regions to be called management? In some places, but not much in the Pacific Islands, burning is done to make the grass more palatable to stock. Maybe this is management. But in many islands the burning seems to be for fun, or to make walking easier -- scarcely to be dignified by the term management. In some tropical areas, especially Malaya, forestry seems to be largely a matter of managing the native vegetation, but in few of the islands is anything so enlightened thought of. Forestry there consists of cutting down trees, or planting areas of exotic Eucalyptus, Fraxinus, or Pinus, or of indiscriminately introducing anything which will grow large enough to furnish fire-wood. In Hawaii there is what passes for pasture management -- introduction of exotic grasses, overgrazing, and attempted removal of the resulting weeds by chemical spraying, or just letting them grow and clearing more land.

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Most vegetation in the Pacific Islands, outside of certain areas on very large islands such as New Guinea and Borneo, and a few high-altitude areas on others, is no longer "original" or "natural" but simply shows the effect of widespread and drastic interference or disturbance. It has been subjected to the ravages of large herbivorous animals, against which it had evolved no defenses. This opened the way for introduced weeds -- aggressive plants of all statures from the depressed Dentella to great mango trees. These have completely changed the character of the vegetation in many places. Over vast areas, brush of guava, Leucaena, Lantana, Schinus, Eupatorium, Pennisetum, Prosopis, Clidemia, Opuntia, and other undesirable aliens has replaced the native cover. The vegetation has been so degraded and changed that what it was originally like on many islands is now uncertain. But I would call little of this management.

Interestingly, only in one place has there been anything said about vegetation management by the native people. Marston Bates has told me that his impression on Ifaluk Atoll, in the Caroline Islands, was that every plant was where it was because it was permitted to grow there. In his book[3] he elaborated on this theme. Closer examination of many other atolls shows that such is the case here and there, especially in the more populated atolls. Of course, this is largely a matter of agriculture -- mostly coconut planting.

Although the coconut plantations or groves are commonly regarded as the typical vegetation of the Pacific Islands, and certainly the coconut palm has been there a long time, it has probably always been associated with man. Only since the coming of Europeans, with their desire for copra for oil-making, have the coconut groves occupied the greater part of the landscape.

And what of the "good old days?" We really don't know how much effect the aborigines had on the vegetation, or how much of their effect was deliberate. The old accounts usually paint an attractive picture. In many islands, probably, the vegetation may have been more than man could deal with very effectively with wood, shell, and stone tools. Furthermore, the level land was along the shore, and the sea furnished abundant food. Bananas, coconuts, breadfruit, and candlenut were introduced and, with a little help, established themselves in certain niches as a part of the "natural" vegetation. Taro cultivation completely altered small areas of marsh, or areas which could be easily converted to marsh. On certain drier islands -- Guam, Mangareva, and perhaps western Viti Levu and Guadalcanal -- a tall, coarse, reedlike grass, Miscanthus floridulus, has replaced the forest after burning. Some of this might be termed management, but most was just interference, some of it mischievous interference. After Europeans arrived, the interference and resulting change accelerated rapidly. With modern tools and motivations, the acceleration became geometrical. Now almost nothing remains of the original plant cover, though probably most of the species still remain in very reduced numbers.

If any of what was here is to be preserved, maybe we had better start some management, in the best sense. Management for such ends is, of course, impossible on the basis of only what we know now. We have a suspicion that, left to themselves, certain native vegetation types, not too seriously damaged, may recover something of their original character. I have seen signs of this in several places in the Hawaiian Islands, even where the destruction had been

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very serious. Frank Egler[4] has made some suggestions as to how such recovery may be encouraged, but so far as I know they have been ignored. His beginning studies, made in 1937, should be continued and expanded. The roles of the important exotic species should be determined, also the place of the indigenous species in vegetational development.[5] Once we learn some of these things we may be in a better position to manage the vegetation, at least to the extent of allowing something like the original patterns and communities to restablish themselves -- though we may never have the means of knowing whether we have succeeded.

Meanwhile, since ecological study is a long-term undertaking, we had better get busy and try to preserve and protect as many areas of "natural" vegetation in the Pacific Islands as we can. Otherwise, the ecological study may fail for lack of subject matter, or may be rather futile from the viewpoint of restoring native vegetation. If the plants that made up the original vegetation of the islands are allowed to disappear or to become so biotype-impoverished that they cannot fulfill their ancient roles, all the vegetation-management in the world will not bring back anything like that original vegetation.

Sincerely,

F. R. Fosberg

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1 F. R. Fosberg. Protection of Man's environment. In, F. R. Fosberg (ed.), "Climate, vegetation and rational land utilization in the Humid Tropics," Proc. 9th Pac. Sci. Congr. 20:159-161. 1958.

2 F. R. Fosberg. The ecosystem concept. In, Fr. R. Fosberg (ed.), "Man's place in the island ecosystem," Proc. 10th Pac. Sci. Congr, Bishop Museum Press, Honolulu, pp. 1-6. 1963.

3 M. Bates and D. P. Abbott. Coral island. New York, 254 pp. 1958

4 F. E. Egler. Arid southeast Oahu vegetation. Ecological Monographs 17:383-435. 1947.

5 F. E. Egler. Indigenous versus alien in the development of Hawaiian vegetation. Ecology 23:14-23. 1942.

FRANK E. EGLER: Director of Aton Forest, Inc., Norfolk, Connecticut, a vegetation-science research center. He has been an adviser on various research and experimental projects concerning right-of-ways and other phases of vegetation management. His published work includes several vegetation monographs (New England, Oahu, Florida), essays on the philosophy of science and the social responsibilities of scientists; he is now preparing a book on critical approaches to vegetation management.

ROBERT R. HUMPHREY: Professor of Range Management at the University of Arizona, Tucson. His work concerns the classification and dynamics of vegetation in drier areas of the United States, Canada, and the Brazilian caatinga. Book: *Range Ecology* (Ronald, 1962)

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Richard H. Goodwin to Pierre Dansereau

New London, Connecticut
March 9, 1964

Dear Pierre:

I am honored to be invited to join your provocative "Conversations on Ecology," and I shall try to respond in the same vein as the other participants of this relaxed and extended discussion. My office at Connecticut College consists of a glassed-in porch on the north side of our biology building. It is called the goldfish bowl. This I am accustomed to having my professional activities exposed to the public view. At least they are there if anybody cares to look, just as are these thoughts which we lay out on paper. As a botanist I shall anticipate a friendly audience in The Garden Journal.

The trouble with scientific communication is, as Frank Egler has so clearly pointed out, that we chiefly talk to ourselves and our friends. When our words and actions come in conflict with the interests of others, we should be prepared to take abuse. Our motives are suspect; our integrity is questioned; we become "controversial" characters. To many of us in the profession this is highly distasteful.

It is most instructive to analyze the restraints which induce men to "sin by silence" in our free society. I am reminded of the recent case of a colleague at a state university who was told by his president to shut up or get out, after he had sounded a warning at a public meeting of the dangers to the community of the dropping water table. Presumably this idea was thought to be inimical to local business interests! Far better to overexpand and create a real resource crisis than to oppose progress! The vested financial interest reaches its tentacles into every nook and cranny of our society and makes its presence felt in innumerable ways, most of them more subtle than the case just cited.

Students, of course, are a very special audience and the nature of our relationship to them as educators imposes upon us special obligations and duties. For instance, in the introductory biology course to what extent should we deal with pure science and to what extent the applied? Can we count on students becoming informed of the socio-economic forces at play in our society, especially as they relate to the application of science to human welfare? Is it disloyal to our profession to discuss the nature of these forces operative upon us as well as of the natural ones with which we deal under the heading of pure science? Far too frequently policies in resource management are not guided by sound scientific principles -- not because of any lack of scientific knowledge, but because of a failure on the part of the public to understand the persuasive power of vested interests operating to the detriment of their own....

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Whenever one discusses natural areas with people, one always encounters the question of their definition. As a start one can define them as tracts of land on which the forces of nature are allowed to operate with minimum interference by man. And yet in almost every natural area one is confronted with management problems and with disturbances which are generated outside the geographical boundaries of the preserve.

For instance, a fenced-in fragment of midwestern prairie can no longer have the precolonial influences of fire and grazing. In order to maintain such a community a deliberate management program needs to be instituted, which may include planned burning and carefully controlled grazing by livestock. Neither of these procedures, however, is likely to duplicate the conditions produced by the activities of the Indian, the buffalo, and the antelope, to say nothing of the prairie dog, prairie chick, wolf, and coyote. I have heard it suggested that a preserve of at least one million acres might be required in order to reestablish a complete prairie community.

At the Connecticut Arboretum we have established two natural areas totaling over two hundred acres. There is still some "open space" on some of the adjacent land, but this is rapidly becoming completely residential. Recent observations document the presence of a wide diversity of mammals and birds inhabiting these areas, but the future of some of these populations may be in jeopardy for various reasons. Let me give a few examples. The size of the Arboretum may well be inadequate to support year-round the present population of deer, particularly in view of the abundance of dogs which get loose to roam the area. Certain species of birds may have their reproductive cycles upset by the predatory activities of jays and crows, the parasitic habit of cowbirds, and the occupation of hollow-tree nesting sites by starlings. All these species have been successfully adapting to suburban conditions and increasing in abundance in the vicinity. The bulk of our summer residents are migrants, which are dependent upon adequate habitat in the winter range and along the migratory routes for survival. At just what point may a cleared forest in South or Central America destroy the winter habitat of our red-eyed vireo or hooded warbler? Or when does a particular insecticide treatment for fire-ant control on a tract in Georgia or Alabama destroy our breeding woodcock?

Our botanical problems include the invasion of disturbed land by aggressive weeds such as the Japanese honeysuckle. Fortunately this species makes slow progress in the native forest. When once established on a piece of land, however, it forms a very dense community. We are studying how this species behaves under various circumstances, when once established, and also how it can be most effectively eradicated.

It has been my intention in this discussion to convey an idea of some of the fascinating ecological complexities of the natural area program. Some of these may appear frustrating to the conservationist, but they deal with realities confronting life on the changing face of the planet.

Dr. Edward S. Deevey, Jr., recently pointed out that if the human population continues to increase, there will soon be no room in the biological energy budget for such creatures as robins and earthworms.....

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John Milton to Pierre Dansereau

New York, May 15, 1964

Dear Pierre:

I have just finished reading over letters I through IX of your most interesting series, "Conversations on Ecology." In a recent letter (V) you pointed out that vegetation science must respond to the immediate needs of human populations and at the same time objectively analyze the effects of man's interference upon the landscape. This impresses me as a statement of considerable importance in that it identifies two very different notions of an ecologist's role in defining man's place in nature.

On the one hand, the function of ecology might be to show in a rather detached manner how humanity has increasingly altered the world ecosystem. Man-induced changes in the natural environment have usually degraded the biosphere, as a whole; yet often man has benefited in the short term through simplification of living communities to cycle increasing amounts of necessary materials and energy through his culture.

Another function of ecology is concerned with what is usually called "applied" ecology; here the management of plants and animals and habitats is stressed, often in response to pressing problems of resource use. One of the interesting by-products of applied ecology has been the adoption of ecological principles and attempts to comprehend the ecological approach by many investigators outside the field.

It is the latter situation that has prompted me to write you this rather eclectic letter on the images of ecology within other disciplines. What are the images of ecology put forth by non-ecologists?

Kenneth Boulding expressed his image of ecology in a recent book, Principles of Economic Policy.[1] He views ecology as a discipline-approach which stresses one of science's most unifying concepts: interaction. He specifically mentions inter-species competition, predation, and parasitism; he also comprehends the concepts of ecological equilibrium and short-run stability. "Ecological succession" is described as a process of "short-run equilibrium positions, each of which passes into the next, even though in fact the change may be continuous and no equilibrium ever stays put for very long."

Out of his very simplified view of ecology, Boulding attempts to show how formulation of economic policy becomes the deliberate distortion of an ecosystem in favor of the objectives of the economic policy maker. Ecology is of special value to the economic policy-maker "in that it points up the complexity of interrelationships and warns against the possibility of getting quite unexpected results."

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In 1960, sociologist Walter Firey[2] attempted to outline a new theory of resource use. In developing the theory, he considers three possible approaches to resource situations; ecological, ethnological, and economic. According to Firey, the ecological approach to resource use takes the physical habitat as its point of departure in analyzing and interpreting problems of natural resource management. The ecological frame of reference is "the state of nature in which the plants, animals, and physical features of a habitat are so inter-related as to form an ecosystem: an entity whose chemical elements circulate along regular paths between the organism and its environment. In every ecosystem there exists a more or less self-regulating biotic community, comprised of its own characteristic association (or range of associations) of species, whose survival is only possible in such a community."

Firey concludes that the only criterion of rational resource planning based on the ecological approach is one of permanence, a hypothetical "climax state among organic physical processes." This image of ecology leads him to reject its relevance to resource use theory as being "something heroic but futile," an inadequate rationale for resource planning.

Political scientist Lynton Caldwell[3] finds in ecology a basis for the transformation of public policy relating to environment which, up to now, has been essentially segmental in its approach. This segmentation, he states, is the natural product of political systems, such as ours, which have developed no clear doctrine of public responsibility toward the natural environment. As a consequence, the need for responsible integration and rational policies toward environmental problems is usually lost in specialized studies of individual problems, often ending in conflicting resource-use judgments. His image of ecology as an integrating tool of public policy is stated as follows: "The natural world, including man and his works, is dependent for well-being and ultimate survival on the maintenance of an equilibrium or balance among the elements of the environment."

Aldous Huxley,[4] in a short paper published early in 1963, concluded in a similar manner: "Ecology is the science of the mutual relations of organisms with their environment and with one another. Only when we get it into our collective head that the basic problem confronting twentieth-century man is an ecological problem will our policies improve and become realistic."

Huxley's image of ecology is reflected in two fundamental questions he poses concerning man's relationship to environment: "Do we propose to live on this planet in symbiotic harmony with our environment? Or, preferring to be wantonly stupid, shall we choose to live like murderous and suicidal parasites that kill their host and so destroy themselves?"

In thinking about these and other images, it seems to me, Pierre, that economics, sociology, public administration, and political science are further removed from the immediate practical problems of environment than medicine, regional planning, conservation, and landscape architecture. In terms of the "feed-back of practical experience to pure science," which you feel vegetation management continually needs, perhaps landscape architecture comes closest to providing this necessary stimulus.

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Ian McHarg,[5] Chairman of the University of Pennsylvania's Department of Landscape Architecture, has stressed the need for increased communication between plant ecology, landscape architecture, and regional planning. In discussing a proposed training program for the landscape architect at the University of Pennsylvania, he notes the following: "The introduction of ecology as the basis for regional land planning can only be of the utmost benefit to the orthodoxy of landscape architecture. Indeed, the time has come when it must be recognized that a smattering of horticulture is absolutely inadequate for a professional landscape architect. It should be maintained as a matter of principle that a landscape architect is as good a horticulturist as he is an ecologist and artist . . . This alliance between landscape architecture and the natural sciences, particularly ecology, is planned to produce regional land planning as a primary product, but also to provide a bridge between the natural sciences and the professions concerned with the physical environment."

Similar arguments for the adoption of ecology as a basis for regional planning have been voiced by Arthur Glikson[6] who poses the question: "Can our civilization achieve its objectives only at the expense of its natural environment? It is the science of ecology which can give a rational formulation to what we only felt about the role of landscape in civilized society."

Glikson goes on to define regional planning "as planning for regional ecology, including both nature and society." His image of ecology is based upon Aldo Leopold's idea that structure means the characteristic numbers, as well as the characteristic kinds and functions of the component species. Glikson has attempted to extend this concept to cover human society and the urban, rural, and regional community.

McHarg's and Glikson's images of ecology, as a basis for regional land planning, extend the application of ecological methods to problems of physical and mental health in the city. In a recent article on this subject McHarg[7] explored the pressing problems of health in the city and the way in which a dynamic ecological approach to planning would provide a more realistic solution. His approach is to view incidence rates of ulcer, lung cancer, hypertension, accidents, suicide, crime, and poverty in both large and small populations as a single problem in relation to regional design. The failure of planners to take this viewpoint in many urban renewal and other programs has tended to "push down one ugly head of pathology only to have another pop up somewhere else." McHarg feels that these high incidence rates can ultimately be lowered for many diseases through use of a broad ecological approach, one which will treat the actual causes of poor urban health beyond narrow symptomatic considerations alone.

The present trend to support environmental health and science programs within the medical field is an indication of a growing cultural awareness of the need to treat the human environment as a whole. This, in itself, is an image of ecology of outstanding importance.

Nevertheless, the most interesting finding, of my quick eclectic perusal of the ecological image came in reading an article by Rene Dubos on the subject of environmental biology.[8] Dubos evidently has no image of ecology at all, or perhaps he simply wishes to create a new science of similar scope. He discusses the need for an approach

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to medicine which would go beyond the "purely reductionist approach" in recognizing that organisms respond to environmental stimuli beyond the submicroscopic elements of the microbiologist. Medically, he feels that environmental pollution of the air and water, psychosomatic responses to urban stress, and the burgeoning populations of the city are important problems which environmental biology should face.

What struck me as particularly odd, as it also struck Frank Egler was this statement: "In contrast /to laboratory research/ there is as yet no sophisticated scientific technology for studying the interplay between the whole living organism and the environment."

The challenge which these varying images of ecology, and the lack of comprehension of ecological method, offers to the ecologist is clear. In the past, ecological science has tended to be "artery-hardened" in the sense that you and Frank Egler have so well argued. Ecologists have not been aggressive in the communication of their science to those who want to apply it; those outside the discipline have often had to formulate their own images of ecology with little actual help or guided comprehension from ecologists themselves.

It is easy for the ecologist to point out the conceptual shallowness and distortion of ecological method by others. Yet how much agreement is there among ecologists as to the "proper" image of ecology? What should ecologists communicate to those fields that want to utilize the tools, concepts, and methods of ecology? Ecologists find themselves in a position described by W. H. Auden:[9]

> ". . . we die
> Each moment and that each great I
> Is but a process in a process
> Within a field that never closes;
> As proper people find it strange
> That we are changed by what we change
> That no event can happen twice
> And that no two existences
> Can be alike;"

Specialists in economics, public administration, political science, sociology, landscape architecture, regional planning, and medicine have only partial images of ecology. Yet, ecology is being changed by the formulation of ecological images within these groups. I see in the varying images of ecology a challenge which we, as ecologists, have not fully met. It is truly our "sin of silence" not to communicate outside our circle, leaving for others what should be our job to help define: our own image.

Cordially,

John Milton

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1 Kenneth E. Boulding. Principles of Economic Policy. Prentice Hall, Inc., New York. 1958.

2 Walter Firey. Man, Mind and Land. The Free Press of Glencoe, Illinois. 1960.

3 Lynton K. Caldwell. Environment: A new focus for public policy. Public Administration Review, Vol. 23, September. 1963.

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4 Aldous Huxley. The politics of ecology. Center for the Study of Democratic Institutions. 1963.

5 Ian McHarg. A new role for landscape architects. Landscape Architecture, April. 1964.

6 Arthur Glikson. Regional Planning and Development. Six lectures delivered at the Institute of Social Studies, The Hague. 1953.

7 Ian McHarg. Physical and mental health in the city. Annals of American Academy of Political and Social Science, March. 1964.

8 Rene Dubos. Environmental biology. BioScience, January. 1964.

9 W. H. Auden. Collected Poetry. Random House, New York. 1945.

Thomas Jukes to Pierre Dansereau

Berkeley, California
June 1, 1964

Dear Dr. Dansereau:

In response to your kind invitation, I first address myself to your letter "Conversations on Ecology," in The Garden Journal, Vol. 13, page 184 (1963), and especially to your quotation from Edmund Burke: "Those who would carry on great public schemes must be proof against the worst fatiguing delays, the most mortifying disappointments, the most shocking insults, and, worst of all, the presumptuous judgment of the ignorant upon their designs." Herein lies the basis of the current controversy regarding pesticides. Those of us who have been concerned with their discovery, evaluation, production, and use have cast ourselves in the role of carriers-out of such public schemes. Ours is the fight against vermin and parasites, against hunger and disease. It is we who receive the public insults; in the Sierra Club Bulletin we were recently characterized as "The hired practitioners of mendacity." Against the fearful, the uninformed, the reactionary, and the vituperative we struggle, only to find that our opponents have stated that they, rather than we, are entitled to the assumption of heroic postures, and that they represent themselves as the only unsuborned dispensers of authentic knowledge.

By your fruits ye shall know them. The majority of people undoubtedly deplore the population explosion, but rare is the individual who seeks to alleviate it by the only socially acceptable method, that of removing himself from the contemporary scene. It is true that all of us at times are irritated with the technical web in which we are trapped. To quote Simpson,[1] "It has long been an open secret that the advances of technology can be a mixed blessing. The Greeks had a legend for it. Still earlier, there was doubtless an outburst of australopithecine invective when it was discovered that fire burns as well as warms." But it is a matter of record that, with the exception of Prospero's farewell address in The Tempest, mankind has not abjured

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the fruits of the knowledge of good and evil. Those who vociferously protest the despoiling of our countryside do not give up their automobiles, their use of wood and paper products, or their hearty consumption of the food which comes from modern farming. The problem of discontent is compounded by the scientific methods which bring us knowledge of facts which were formerly hidden from view. It is only sixty or seventy years since radioactivity and its harmful effects were discovered. Yet the scintillation counter now tells us that since the beginning of organized life, all cells have contained radioactive carbon and potassium in small traces. As the resources of vapor-phase chromatography, mouse tests, spectrophotometry, neutron activation, and micro-analysis are deployed on ourselves and our surroundings, the horror mounts. The brilliant flowers of a morning glory (Ipomoea tricolor) are said to be the harbingers of a hallucinatory drug[2]; we have just learned that the friendly Mr. Peanut is apt to contain aflotoxin, an injurious substance picked up from molds in the soil, that produces "milk toxin" in the milk of cows fed peanut meal.[3] The cholesterol that is present in every animal cell can be shown to produce experimental cancer.[4] Most damnable of all because they are synthetic, detectable, and new, chlorinated hydrocarbons have invaded every nook and cranny. We are told that they are in the eggs of the few bald eagles which have survived the gunfire which blasted most of this species from the skies of Alaska as a result of the bounty placed on carcasses of the national emblem by the Territory that became our largest State. It would be indeed surprising if most chemical substances, including recently-introduced ones, could not be shown by delicate testing procedures to be widely distributed. One pound of a chlorinated hydrocarbon can furnish one billion molecules to every square foot of the United States if spread uniformly. If we are to be increasingly informed of the chemical composition of our environment, we must learn to recognize the difference between a toxic dose and a tolerable dose. The opponents of fluoridation seldom mention that fluoride is an essential component of the enamel of their own teeth. One of the most startling illustrations of toxicology was recently provided by George McNew,[5] who pointed out that adenosine triphosphate (ATP), a central substance in the functioning of all cells, with a key role in the process of photosynthesis in plants, is utilized so rapidly that an active boy may produce and consume his own weight of ATP in twenty-four hours; yet ATP when injected can cause death.

In the series of letters in "Conversations on Ecology" and in other similar articles, certain opinions are expressed which I shall take the liberty, in some cases, of summarizing, or of oversimplifying, as follows:

(1) "There are too many people, especially new arrivals, they are cluttering up the landscape and they are spoiling everything." I suppose all of us feel this way at times, but I can't help noticing that vigorous conservationists often produce splendid families of four or more children. It seems certain that we shall continue to do medical and pharmaceutical research to preserve the life of every human being who can be helped, and that we shall make every effort to provide the food, clothing, and shelter which people need, hoping at the same time that some means and desire will emerge to limit voluntarily the rate of increase of population. There is criticism that agricultural production is too intensive, but against this must be weighted the consideration that natural areas of parks and wilderness may fall under the plow if the farmlands do not supply

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sufficient yields of food. I can remember World War I in England when virgin turf in the estates of the wealthy was broken to plant potatoes.

All of these arguments may well be in vain; the human race may be in the logarithmic slope of the growth curve, plunging ahead to destruction in a concrete and stainless-steel charnel house, but if we hope to check this onrush over the Gadarene precipice, we must at least talk to each other without recriminations.

(2) "Those who are concerned with the production and use of pesticides are inherently suspect because chemicals are produced for profit. Any statements that these people make are sales propaganda." Such an attitude shuts off debate and draws battle lines. It is easy to shout in return that professional conservationists solve their fund-raising problems by making up sensational stories about the destruction of robins. If we don't like capitalism with all its advertising and free-wheeling competition, let's take a look behind the Bamboo Curtain. A most instructive article appeared in Science[6]; it cited reports that in 1958 sixty-five thousand tons of benzene hexachloride were produced in Communist China and that sixty pounds of indigenous insecticides were applied to every acre of cultivated land. One photograph shows Chinese workers stirring iron pots in the backyard of a rural insecticide production shop and another illustration is of an admired peasant who, with his family, captured and killed thirty thousand sparrows in the winter of 1957. Enough is revealed to show that technological intervention in ecology is not exclusively a by-product of the free enterprise system. We conclude that statements about pesticides should be examined for their reliability without prejudging them on the basis of the affiliations of their authors.

(3) - and I quote you - "Thalidomide and DDT are certainly part of the same scheme, not to say suicidal conspiracy, as nuclear warfare." Well, I don't think you can lump such things together and then accuse them of guilt by association. They are not actually related just because they are products of technology and of recent origin. Crimes of violence are so common in Central Park that many people shun it. Yet I would not cite this as a reason for concluding that parks are undesirable, dangerous, and should be abolished. If you will accept for reading a reference on DDT, I recommend the seldom-read monograph by Simmons and co-workers[7] which has a bibliography of 1556 literature citations and from which I have quoted[8] regarding the millions of lives saved or prolonged by DDT. Undoubtedly each new scientific finding has far greater possibilities than formerly for affecting vast numbers of people and large areas of the earth's surface be-because of the expansion in industry, communications, and transportation. Furthermore, technology is expanding at a precipitous rate. We watch and participate in a climactic event in history, marked by a sudden flower of the tree of knowledge. Even with all its dangers, frustrations, despolia-

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tions, and cataclysms, is this not the greatest age in which we could have lived? We cannot turn our backs on the future, we can only help our children to meet it.

(4) "The management of vegetation is wantonly upset by the indiscriminate application of non-selective herbicides." If this is so, let us encourage more research into the discovery of highly-selective chemicals, and let us explore all other possibilities for the control of weeds. I don't think we shall return to the days of "The Man With The Hoe." The subject of vegetation management, or interference as Dr. Fosberg terms it, is so large, complex, and varied that surely it must be approached on the basis of the specific problems for each locality under consideration. The beauties of Daucus carota, which goes by the delightful name of Queen Anne's lace, are obscured to the farmer who finds it in his hay; the bright flowers of wild mustard do not compel admiration when they are studded through a field of young wheat. I have worked on a farm; I have spent days in chopping at Canada thistles and in pulling pigweed by hand; I have gained confidence in the ability of intruding wild plant species to survive efforts to eliminate them. The browning of roadsides and rights-of-way is unsightly - in summer time. But do we not hail a few weeks later the anticipated arrival of the legions of Jack Frost which withers and strips the leaves in Nature's pageant?

(5) "Current recreation policies are detrimental to the conservation of natural vegetation." This problem is mitigated to some extent by the tendency of modern human beings to congregate in droves. It seems relatively easy to herd them into an assigned picnic ground or swimming pool. A few eccentrics stray into the periphery, especially if they are encourage to do so by planting streams with fish. Most people, however, will stay in designated areas if they are told that the back country contains rattlesnakes. Miss Weadock[9] says that wilderness camp sites should be for those who know and appreciate what camping really is. True enough, but who will rule on their qualifications? I shall finish by giving my own recipe: A knapsack, a few pounds of dried food, a billy-can, a ground sheet. Strike away from the John Muir trail; climb above timber line, and follow the stream until it disappears in the talus. No one will follow you. Here you will find a few dead twigs of the arctic willow enough for a small fire to heat a pot of cocoa. Your companions will be the hoary marmot, the rosy finch, the Parnassus white, and the yellow hulsea.

Sincerely,

Tom Jukes

[1]G. G. Simpson. Science 144: 38. 1964.

[2]P. Clark. The Garden Journal 13: 185. 1963.

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[3]H. de Iongh, R. U. Vles, and J. G. van Pelt. Nature 202: 446. 1964.

[4]F. Bischoff. Prog. Exp. Tumor Research 3: 412. 1963.

[5]G. McNew. Pesticides, Their Use and Effect, A Symposium. New York State Joint Legislative Committee on Natural Resources, Albany, New York. 1963. (p. 67.)

[6]T. H. Cheng Science 140: 269. 1963.

[7]W. W. Simmons (ed.). DDT in Human and Veterinary Medicine. Birkhauser Verlag, Basel. 1959. 570 pp.

[8]T. H. Jukes. American Scientist 51: 355. 1963.

[9]V. Weadock. The Garden Journal 14: 61. 1964.

LUNA B. LEOPOLD: Chief Hydrologist of the United States Geological Survey. He has taught meteorology and river mechanics. Books (in collaboration with others): *The Flood Control Controversy* (1954) and *Fluvial Processes in Geomorphology* (1964).

JOHN MILTON: Associate in Ecology, Conservation Foundation, New York. He has organized and participated in numerous excursions: Chiapas, Yucatan, Costa Rica, British Columbia coast range, Southern Logan Mountains of Northwest Territories, Coast of Alaska, Masai region of Tanganyika, and Mount Kenya, and the Azores.

PETER WARDLE: Botany Division, Department of Scientific and Industrial Research, Lincoln, New Zealand. His main interests lie in the ecology of mountain vegetation in New Zealand, the causes of timberlines, and the regeneration of podocarp forests, as well as problems concerning the distribution and Quaternary history of New Zealand vegetation.

F. RAYMOND FOSBERG: Botanist, U.S. Geological Survey. His main interests concern the Pacific islands, their ecology, land-use, and man's effects on them. As author or co-author, the following books: *Military Geography of the Northern Marshalls* (1956), *Man's Place in the Island Ecosystem* (1963), and *Atoll Research Bulletin*.

RICHARD H. GOODWIN: Professor of Botany, Connecticut College, New London. His primary concerns are: plant morphology, physiology, systematics, genetics, ecology, and conservation.

THOMAS H. JUKES: Professor in Residence of Medical Physics, and Research Biochemist, Space Sciences Laboratory, University of California at Berkeley. Author of *B-Vitamins for Blood Formation* (1952) and *Antibiotics in Nutrition* (1955).

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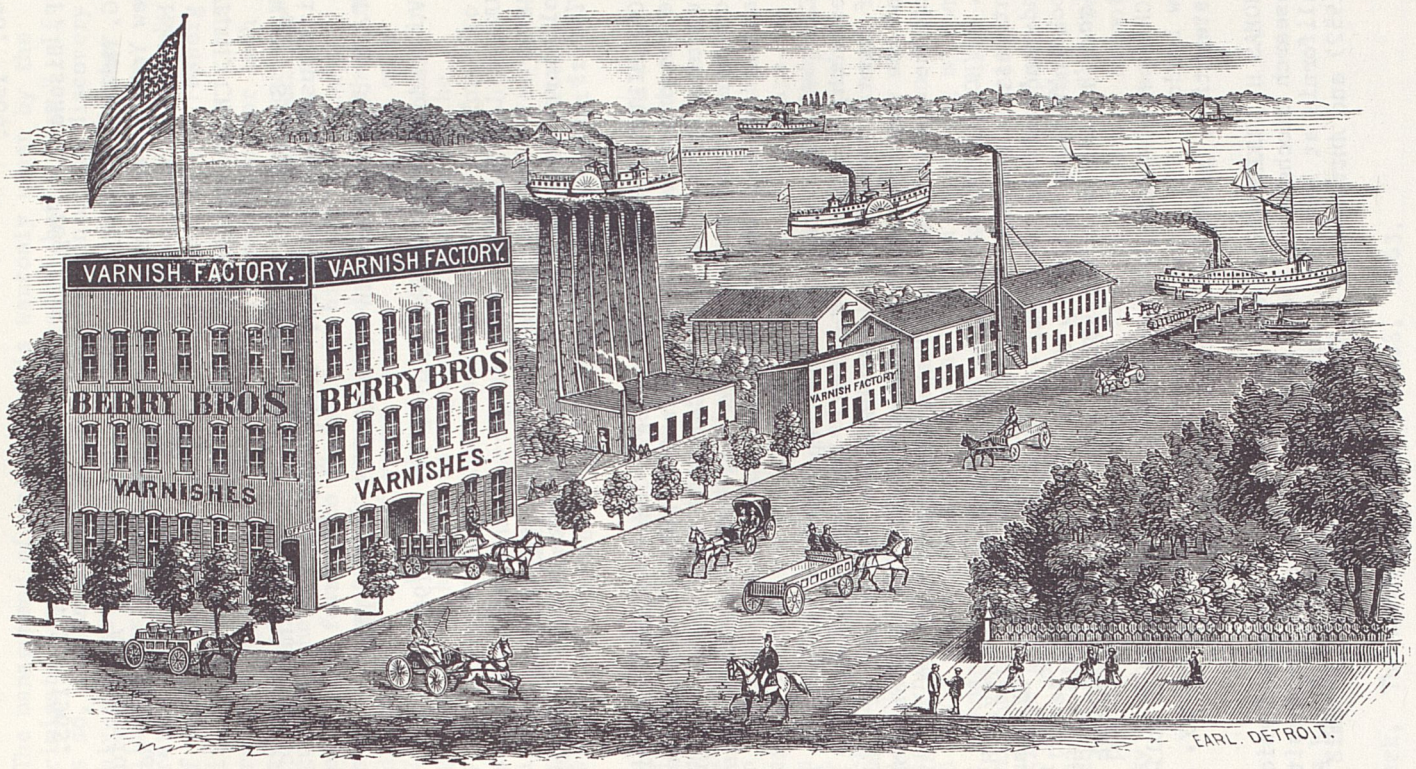

Manufactory and Warehouses of Berry Brothers, Detroit, Michigan

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RICHARD KAMLER: NOTES FROM ARYIIS

given an organic system of regenerative being
there is always birth
always a within of things
always a time to live and a time to die
given this
all things are predictable

ARYIIS: a creative concern for man-woman
on
in
with
as part of the earth environment

ARYIIS is an ecologically constructed work-learning environment. It has the potential for becoming an experimental urban pattern.

ARYIIS is formed, forming, forms, manifests itself, gently, from the following edges:

- architecture is a basic evolutionary pattern. it concerns itself with "doing more with less." its genetic stuff are the essential diagrams of biological geometry.

- now man has techno-electronically evaded "normal" biological sequences of evolutionary adaptation thru his capacity to extend-externalize his tool abilities thru symbolic means, both physical and non-physical. he places upon himself more direct control of a consciously designed future - evolution by consciousness, not by accident.

- winds of fate are energy flows. we design an organic future. earth might be dealt with as an intuitive object.

- the quality of life on earth depends upon our success, or lack of it, in understanding, in anticipating, and in managing global energy transformations. transformation of environmental conditions is the first step in the transformation to more consciousness.

- energy from a "noosphere" (envelope of consciousness encompassing planet earth, partial biosphere overlap) has force, direction and magnitude of varying intensities; unravel a golf ball.

- note on a golf ball: a physical metaphor to visualize concept noosphere. begin to unravel this ball and find a global network of highly tense inter-connecting inter-locking energy lines. expansion and contraction (breathing) of these lines is in response to pauses and processes that take place in any energy organism - a pause builds a slowly rhythmic city: architecture, historical, where we are going, where we've been - a process, genetic architecture, outer edge spatial evolution with man as phenomena. finally, four-dimensional cities??? and awesome wilderness.

- in one scheme of things, a population implosion may be seen as

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simply an evolutionary development of a unique species.

- survival of a unique species can be constructed around a drive toward greater integrative functions.

- future man beyond his presently knowable ecological niche??? ...an ecological approach perceives the environment in the only way possible, if one is honest: in human related terms.

- we are no longer instruments, products of the circumstances of nature; we are processes of responsibilities, fluid finalities of form and space, and no gods, however tender, shall smile down upon us if we do not behave so.

- noosphere architecture: outward in space-pools of food-different intensities open up and spread out to slow velocity-node point settlement is here-energy eddies down to erupt elsewhere-partial destruction of non-biologic habits and freeing of biologic awareness.

notes from Aryiis.....further

- formative: fifty people - four cardinal ways, energy storage forces at the two solstices and the two equinoxes, and evolution takes place within the existent seeds of destruction. the production of obsolete packages is unwanted antagonistic action against man (plant/animal) communities, when the aim of all design direction is the enlargement of awareness/consciousness thru environmental conditions into man's experience.

- the physical nature of Aryiis is the first name walking distance - the nature is aesthetic and the missing element in design-directed future evolution IS aesthetic. despair moves aside from the waves. the fulfillment of the aesthetic requirements of man. (people go to museums for "outings," and they are mobbed. unfold your skin and run down the street and know there is something beautiful as well as the first name of the dream.)

- i hold the reality that a useable environment not groping to be art is empty. too easy to describe and not creatively complex. evolution to more consciousness is to more aesthetic.

- mind creates and evolves itself within an aesthetic consciousness and the spirit of man is wandering. impossible to stop? we are to mind, and mind as a tangible aesthetic entity, one that is universally experienced: or the poetic of function-building become architecture. architecture is more than physical brain. space is mind. architecture is the making/evolving of space.

- i form architecture to the sun and the biosphere does not end when the light goes down - gravity continues an energy flow downward, and shit, cast off skins, and dead and alive organisms continually fall from illuminated regions into the depths and well back to the surface with turbulence.

- ecology does with how we build our cities and where those are who have put us here. earth beckons and water builds up a large

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hydrostatic head and stress and pressure turn inward and evolutionary complexity increases and stars pass. i become a doctor minding beams columns air-conditioning electricity and plumbing so that they are no longer necessary as ills. and rain dancers call the snake gods from all heavens. the sun "still" rises in the east. the problem has hazy boundaries and unknown edges. my mind/body is free and immortal...here and now.

- the ascension of noospherical architecture: noosphere is carved for light and dark. light...high energy, evolving rate of space is high, exterior holes for power traps. dark...resting energy, evolving rate of space is low, crumbles to new form of non-biologic habits. the obsolescence of spill and waste. i don't know all phases of object earth. i can intuit its rightness. it is an object for architectural study - a single item of oceans and mountains and deserts and forests and plants and animal communities.

- a birth: in the beginning is the fantasy which leads to myth which leads to religion, festivity and celebration... and then to incorporation. but in the beginning is the city for/with man, 1971 A.D. we have our fingerprints in the clay and evolve in our city as a unique species. highly organized but not yet highly bio-logical. technology of hot and cold develops so that heat and cool energy are saved. zero waste. a closing of the cycle. finishing one gestalt. a level of aesthetic reached and passed. city is for one man.

- the wind eddies. channels its force. is curved. space for powerful winds house energy generators, energy accelerators. the wind is caught. rocketed about. lines of force interact. they are helical. the form bends and turns them around. at end-center of the field is earth-quaking. the genetic structure has brown blood. primeval. om. on a motorcycle the hair stands straight out. the wind is force. it turns cities and a full moon pushes gravity and the menstrual cycle responds. architecture is spinning and we are at last laughing with tears.

- it dies. the wave rushes forward; it dies and is no more. the eye of the salmon pops out from super-saturation of nitrogen in the water due to damn dam building up stream. slack-water. the diver gets bends. presently there is too much nitrogen in the city. it gets bends. is about to explode. is exploding. the organism is shattered beyond known geometry and we are re-born with a great giant toilet-seat floating in the sky. the flower knows what it is to become. the complete cycle is known. is stored in the collective unconscious of the family. the city is earth sign. its chain is multi-dimensional and the set-up vibrations clang remorselessly all the way to heaven. true, the next step is the city. evolution. not as contained vessel. nor as mixed blanket. but as organic moving synergetic fit wherein this whole is greater, more complex, more evolved than the sum of the contained parts...a transportation net is primarily for organisms with different size feet.

1971

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from Aryiis

- I hunt for bones and live in mostly dark special sewers. and the trout swims in circles. counter-clockwise to the orbit of a full moon. in the city a light swims and explodes. the knife fish occupies a sense of place. he takes possession by creating an electrical field and then picking up breaks in the circuit. I pick a break in the circuit and move with ease along a path that has green and red and ends with me. 24,000 miles leads to the beginning and it is all in me. loudly and quietly. in my town all the utilities are underground and I form a stalk between heaven and earth. i stamp on the ground and it is spring. neither do i rape nor fly nor seek death. it is a sun transmuted in the city. my house is a filament. a throbbing skin. a communication metaphor all brought home. photosynthetic. all power sources go through my stalk. a march wind and i breathe deeply and face to the yellow with a slight pain in my left rib. remove it for life. i am a wire and race unblinkingly to the god-sun. no wolves. only architecture. i keep looking up. i see the grass grow and organisms fit in the environment. synergetic fit. an evolutionary dynamic occurs. more complex. more than the sum of the parts.

- architecture is the process of finding fit environments... and listening. pay attention. an eskimo believes that the essential VIBRATIONS of human speech were taught to him by the wind, the sea and the animals. tibetans call this "seed syllables." of course, every seven years the cells of our body re-new themselves entirely. of course. a constraint in design...if you don't have room in your living room for an elephant, don't make friends with the elephant trainer. sufi.

- it is a renaissance. elephants in the living room. orangutans in bath tub soaping their toes and fingers. creating utopias for the bathers. a city. new forms. what new wo-man. it is a renaissance.

- analysis shows it inevitable that in a system promoting only vertical mobility, awareness, dream extension and fullness of earth environment are sympathy crutches and thus expendable in one species climb. we have yet to move in all directions at once. the energy is greater. more dense. more compressed. more people. more consciousness. more awareness. the edge is sooooo delicate. it is outside the law. a tightening spiral.

- one of the penalties of an ecological education is that one lives alone in a world of wounds. much of the damage inflicted on land is quite invisible to the layman. an ecologist must either harden his shell and make believe that the consequences of science are none of his business, or he must be the doctor who sees the marks of death in a community that believes itself well and does not want to be told otherwise. Aldo Leopold said that. i agree. i said that.

- a bizarre pyramid. state. federal. city. town. village. somewhere me. a state uses federal money to develop and mass produce a mechanical harvester can do....but not as fast. the seasons go slow. earth/man. a narrowing of the passage and a meta-physical, now physical, turn toward death. and if you're serious the desert is there. i hear bavarian with an english accent spoken by the spade-foot toad. what kind of plague is it when the blind are led by madmen?

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- his essence was born from a stone egg. and apparently he came out full formed with eyes that pierced the deepest halls of heaven. the only creature to overthrow the entire bureaucracy of heaven simply by mischief and a powerful stick that changes size. the rhesus monkey is not an endangered specie. he is unsurpassed in the great primate specialization called flexibility. however russia and america have found them to be "little people" and have no qualms about sacrificing their lives.

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Richard Grossinger: from Book of The Cranberry Islands

from Chapter One, "The Glacial Island and Daughter Islands"

The present powers lie in their disposition. It is perhaps the radio noise of an entire body, no other interpretation is possible. The purebred is now, strain of sunlight and poison, not accidental, Jerseys and Guernseys, and the bull Coelebs who sired a whole state of beef. Lobster world forty fathoms under, their bodies piled like jewels in the polluted harbor, in the now.

A red crossbill, majestic young bird, honking wildly in the corner where the cats have thrown him and cornered him, in the newspapers behind the door, a species. The grasp of another world is upon us, waking us with its voice. We release what we can, what still has wings, back into the forest.

With child in backpack we ourselves go for a walk in the woods, the dark river in gulley, the cats coming to see what they have never seen, born inland, in basement apartments in Michigan, and in Colorado mountains: the ocean, the sea, sniff the salty mussel beds at their feet, tiptoe on rocks, and stare blindly outward into absolute space. No matter how they change their vantage, it remains, is unpassable.

We see the islands in time, three dimensional in utter sunlight, in humpback splendor, in broken field dashes, open gushers, bubble lakes thru mountain peaks, in French and English, its Cadillacs and Suttons, its twice history. Everywhere we look there are more than three dimensions, for the tongues of land go out into the ocean, and the ocean penetrates the lacunae, lagoons of land. ISLES DES MONTS-DESERTS. Champlain's island. One of the Viking islands, so that even Leif Eriksson is buried here.

Mythology. Not that geology shapes geography shapes the biology: with psychology and ecology following upon, hewed to the land, BUT THAT All are simultaneous in a place. And though it is reckless to speak of "out of mind and out of nature," I mean here that the connectives are so large that we cannot have them and the matter at hand as well; in fact they are as large as we would have them in wanting to approach the large. Too large for the small. The final substance is astronomy, and upon the large the position of the small is so exact as to be unmistakeable. History.

I come out into sun light. I do not hear the radio noise. I do not see the source. It is all around me, as large as perception, the work of the glacier, of rivers, waves. I see their operation. Brings stone. Washes stone away. Indistinguishable, the present moment. I come out into --- suddenly aware that my life neither begins nor ends but is subject to this material, place, and will always be just what it is now. I will never know any more.

It's mammoth, as large as I come into the awareness, exist myself in the historical, in Champlain's time; I exist in geologic time, a base which is shaped, irrelevant only to the degree that I fail to be aware of it, and our lives as large as we choose to live them.

In the age of the emperor's new clothes, the man fears that he will be fooled, that there is nothing beside his personal history, the Freudian temporal content of his life. And anything else, out of mind, out of nature, is the clothes the emperor thinks himself to wear when he is naked; thousands of academicians

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laugh at him, exhibiting his body on an occasion of state. Then they retreat into their journals of continuous statistical proof, clothes that will keep them warm and in style for at least how many years. We are in the Victorian Age of the imagination, where everything must have its place in mind or in world, where the vision itself of a whole history, a place, is fractured into various diminished subsets: for your conterrevolutionaries look among the academic Marxists, on government grants to prove proof, on which the whole Mafia America-Russia conspiracy stands. Proof of the technocracy. Proof of the existence of the Western World.

Glacial fingers extend in time, in tens of thousands of years. No man wears their watch on his wrist/a fist of ice squeezes from the granite mountains of the Maine coast: an island. Now in the fabled North the work of mountains and sea are daily and simultaneous, children of the same mother. Sea water rushes inland, upland, with the high tide, every inlet harbor cove bay, and fiord itself, Somes Sound, a gash beginning in the center of the island as where the genitalia would be, going out between the legs into the ocean, where the Cranberries lie

In 1754 Abraham Somes

.....so broken and revealed that we are too, and in living must explore all the passages. A woman who could be so beautiful.

The first settlers built their farms and mills around Somes Pond and Ripple Pond. They froze the clear water of the lakes and sold it to the ships for ice. North of Rockland, North of Gloucester, they built ships, cut away the first growth, went fishing on the Banks, traded with the rest of the old New World, in South America, and the West Indies, and Baltimore, Albany, Portland. We learn from Virginia Sanderson, seventh generation Somes and President of the Somesville Historical Society, that Abraham Somes came back in 1761 with a man named Richardson, to Somesville. The conch shells in the old houses of Somesville come from the West Indies; these are replicas of a mercantile age. After years of college teaching in Ohio, a retired Virginia Sanderson buys the old house on the mill pond and returns to the Somatic, the genetic, to write the same book, of the patrilineal, the self. A History of Somesville. The ducks float in peaceful formation on the fresh water; the gulls hover over the edge of the domestic, wild, saltwater beings of Somes Sound the water pours off the edge of the table but is refilled under 102 by inland stream.

This is one direction of settlement, known as New England; and the other is Gull, from the Old World by way of the sea: Spurlings, Stanleys, Bunkers, Hadlocks, entering the Cranberries even before there is evidence for them, some of them sheep thieves, others sailors seeking a fishery that was not England. For decades they lived out there, protected from Indians, French, and the King, and then one by one they moved in until whole islands were abandoned, Stanleys, Fernalds, marrying all the Somes daughters and taking over the town. "It ought to be called Fernaldsville today," some grumble, as if they were sea scorpions or locusts, breeding in a science fiction plot with the Daughters of Massachusetts and Governor Bernard, taking over the mortuary and burying the islands' dead.

A land of tarns, kanes, and kettles; witches' holes and halfmoons. So the balance between high tide and low tide, in land and out land, is the balance between the glands and bodies of seawater and freshwater, lakes buoying lagoons, upper and lower landlocked Hadlock ponds in counter-rhythm with the salty Pool of Great Cranberry Island, from whence the Hadlocks came.

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The material is itself subject to place. The ground, or landscape, under forces as difficult as thought. A river. A tilting of 60° on its axis. Stone lies at the bottom of it, is seed. Four quarts of milk for a pound of butter, seven pounds of butter a week before going dry. River of genes.

"These inhabitants cultivate enough land to provide themselves with potatoes, corn, barley and vegetables, but they spend most of their time cutting wood into shooks and barrel staves which they sell at a good profit to merchants. Each family has a small boat from which they catch cod, and cure it, and exchange it with the merchants for flour, sugar, soap, molasses, oil and other articles that they want. All have cows and farmyards, poultry of every kind and fine pigs. They make cheese which they sell at wholesale. On the day of my arrival there were five ships in Frenchmans Bay, one of which sailed for London, one for Santo Domingo, and three for Boston, loaded with plank, timber, shooks, bark, and even cordwood, which the people cut on the edge of the bays or in the forest." Bancel de Confoulens, 1792.

Enoch Stanley sits on the small public bench in the center of Southwest Harbor telling how his mother lived out on Baker Island, furthest of the Cranberries, a race building great ships, trawling, farming, the women separating the milk, and in another building, made of local forest, the men storing wood for the winter as at 3 P.M. total darkness forecloses day on another island, a Baker, crossing the meridian as it does, swiping away another angle, the men up at dawn after cod and hake. In those days Enoch bought fish on Great Cranberry from the vessels for his uncle's place, Stanley Fish, in Manset. "32¢ a pound for cod," Enoch says, blowing on his pipe. "Now you can get 6¢ for it."

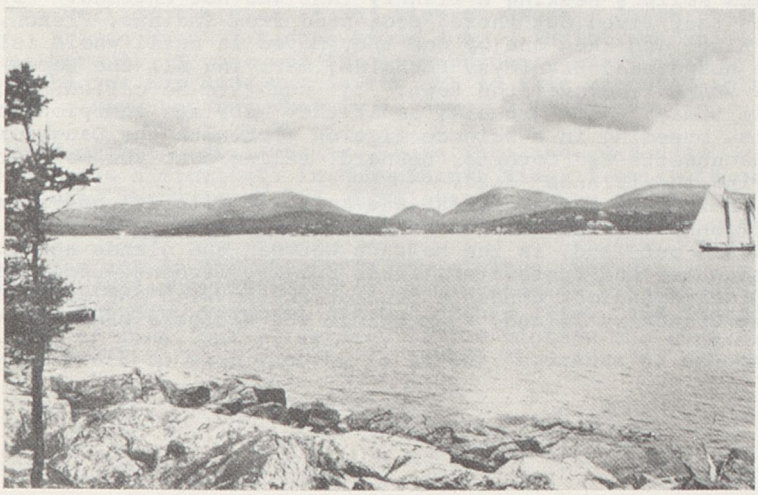
And though the Coast Guard has run electric lines out to Baker Island, lighting up the lighthouse, all the windows are smashed by drunks on motorboat picnics and football players from University of Maine fraternities, and each year one old house Ene remembers is burned to the ground while they piss on the fire drinking their beer.

Baker Island. Green Nubble in the bay.

Burning down an island they call it, the glacier gone out back to sea, the light of another kind returns and will burn there, till stasis.

Like a forest.

The fire starts here and goes into the cities, recoils from the cities and touches down here, as the demand for, the price of, fish.



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[from Chapter Six, GEOPOLOGY IS OUR MEASURE]

There is no source of the fertility in the soil; it is a matter of neither worms nor clams but migrates, as the river itself, and its materia is invisible. Its real history is too large for the town. It is an event of astronomical size that travels in schools like the bloods, that beds down in an instant like a solar eclipse. Fertility is not one material or the other, but a shifting of bonds, the goo. Peck Shores they used to call the banks of the Jonesboro River, a peck of clams was all it was worth, until invisibly, as a function of itself, the garden hatched. The river carries not just egg or seed, but the name of Jonesboro, even as the Hudson bears the weight of on its shoulders: New York. X ='s Y. The weight is the same.

"I have studied old bones," says the Park Director. "Palaeontology is a hobby. And I think that man should know he can become extinct. At this rate he will."

What about consciousness? I ask him. Will that branch of the universe become extinct, extinguish too?

"That's not my bag," he says. But I am speaking of the size of an astronomical event, the brightness with which Orion burns, and the Dipper, when the river is dark, the clarity of the air. He remembers nothing of it in the morning, but I tell him that I *do* remember the dream, and it is unmistakeable.

"What interest if it is just your own memory. How can you learn anything from it?"

Yet all that the mind receives and stores is history, culture (you can call it that); it is my own psychic life, deep as the river, filled with, as the geography it spans, that spans it, its time. If remembered, which is to say: if real, the dream is more informative than the newspaper or radio; it melts the false accumulation of statistic into the single historic event of our time. Jonesboro River. In its own space, made of the forces of geography, called elsewhere: simply the memory, will not become extinct, pulled like the seasons, like a rabbit out of a hat.

The politicals invade Maine. Richard Nixon campaigns. Lester remembers him; in 1962 in Bangor he held up a lobster, one of *his*. The river is invisible. Machiasport is a city is not yet San Francisco is not yet the content of its life. So the solar eclipse is an event whose only reference to the Earth is where it is. Jonesboro, Maine. The Machias River. Clams. I say that a city will bear as much psychic life as is in its place. Re: Portland, Maine. Casco Bay. Cape Elizabeth. It is not San Francisco I dream of. It is a city more important in history than that. It is as large as those cities I imagine in the North. The souls are gathered, various spooks and spirits, bloodworms and sandworms in the coastal beds; they cannot be cultivated, and Jonesboro cares nothing for them, or for Richard Nixon. Clams can be cultivated; they have roots in the mud. Consciousness. Money in the bank. I ask: will that

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branch of the universe become extinct too? Nonsense. We should rejoice in the splendor of our time.

But the Underwood Factory is gone, and gale-force winds have taken the Tower, huge silver spheroid, lies in tidal waters, UNDERWOOD. When the Tower is blown to the ground its associate spirits wander unattended. In the old days Underwood operated a pirate ship, a converted sardine boat, the men would live aboard it, raiding under the cover of darkness in Roques Bluff and Addison, in Jonesboro, Millbridge, Harrington. In the old days there was a city, conscious of its arms and legs, Beals and Jonesport, Norse, North raiders. Underwood is gone and the capital is fallen, and the name of the town is Moon City: low drainage tide reveals that there are huge tough clams, almost inedible except for stew, reveals the torso and the legs, that the power of restoration, even in Jonesboro's river, is sexual, can be coaxed, drawn, even if she is forced to work in a blueberry factory, even if inland her body freezes and says no more and the harbor is closed, there is still the frozen floor of the spruce forest, and the trucks drive over her to haul the wood out, parts over parts, winter and wind absorbing the hum and heat of the saw, burning away in Woodland, ember February sun, even as Eastport and Calais fail for want of herring, and the compass rusts aboard the ship, deeper and deeper into the forest they cut. And I have come this far to tell Frederick Turner that there is more than one history, and more than one frontier, and it has not yet been crossed in Washington County, moving from the South and Passamaquoddy and Pineoca to the North and Georgia-Pacific, and does not end with the present shoreline or continental shelf, or even with the known cities, but is the density of avenues in this nation. The body of the sardine is the pulpwood, the seiner is a mill, grinding the spruce, turning the forest into inflationary paper, a daily newspaper deaf to the music of its growth, but giving off a hell of a lot of heat.

"Beg, borrow, or steal," says Lester, "but buy that 85 acres. $18,000 now is $36,000 five years from now. Everything's sky-high."

"I know," says Harvey Moore, hunched over his chair, almost motionless as a toad, "but it's got to stop somewhere. It always does." Bartletts Island 1887, Alley, Butler, Somes, Ed Bartlett, C. Bartlett, W. Bartlett, D. Bartlett, paupers, farmers, mills, the treasure map is purchased by one man. "I hear they're building a tunnel across to there," says Merton Rich.

"And the minimum you've got to have in the bank before they let you settle there is a million dollars." Lester.

"Well, let me see my account," says old Harve. "Guess I'll have to look twice."

"Can you remember when we used to dig clams over there," says Mert. "We'd sleigh across the ice. The place was debris and old houses. We'd cut up some old tires and set them on fire, cook the clams and sell 'em for 12¢ a pound spending money."

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"That's quite some land now," Lester throws in. "I was out there two years ago. Why there're spots for at least two marinas. And they could put a golf course there."

The Tower has fallen into the tidal waters, and the spirits wander without a body, without an island, without a ship; Turner's line is a circle, land falls beyond it into disuse, Ober's woodlot, the golf green, crosses back over, reaching the Coast and finding that San Francisco is not the bay, there is another city there; the first owner dies a pauper, the land is given to residual spirits, to tax liens, is claimed by ordinance for the people as long as sun is covered by moon, as long as low water falls within high. The line is drawn in the flats.

Or in Jonesboro, Keith Schoppee, first selectman, has nothing against the diggers from Jonesport and Beals. "We all protect our own," he says. "I don't blame them. The grass is always greener, and we always try to get what we can. It's really no one's fault; it's not my fault, it's not their fault, it's not your fault; Underwood polluted all their flats, and that's the reason they're coming over here to clam. Now Jonesport and Jonesboro may have been one town once, but they asked to be sawed off, and that was a long time back before you or I was born. 'Saw us off,' they said. Well, we sawed them off, and these are Jonesboro town beds now and we aim to conserve them."

So the question to Mr. Schoppee is oil or no oil.

"I'm not on record as being for that refinery. But the clams aren't gonna last forever. You can see that now with the diggers wandering all over each other's flats. Then some evening somebody's going to pull a rifle. I just hope it isn't gonna come to violence."

We all do, residents of this world age, of Washington County, and a violent galactic life. The river fills with genetic blood we feed off like Dracula, Maurey Snowdeal digging in Jonesboro, and in Jonesport Arpy Alley with 9 or is it 11 or is it 13 kids, clams. The Tower Card tumbles, and we move to the Star, the angel filling the pools of matter with the five landed senses of geography, the clam digger awakes from the seven spiritual centers to catch the midnight tide; the water returns, the frontier is crossed, we're back in Machias at the town meeting, the Moon, one type of body has passed into another; the transfer of deeds is frantic, ownership is uncertain. The clients are in-state and the buyers are out-of-state. Lester's uncle downeast: "I won't tell you how much he got for his land, but it's enough to keep his groceries and other bills paid for ten years. All it was was some blueberry land and a few Christmas trees."

Every half-decent island in the Gulf of Maine is bought up; prices soar as values pass each other in 1970. But below Bartlett is Hardwood, below Hardwood is Moose, below Moose is Bar Island (2), below Bar is Trumpet, below Trumpet is Ship Island, small rocky body we have spoken of before, flanked by Eastern and Western Barge. Here the birds breed ravenously and with

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terrific stench, a spiritual center for this stretch of coast, or something draws them there, as cod is America is gold, and no one has or will buy it, not even the Audubon Society, which has bought two Ducks and McGaffreys already. Shags and ducks and gulls and crows, building their nests, little log cabins visible to the passing boats, high on the rocks, 'so their own smell'll blow away from them,' Harvey Moore says. "A man needs a bandana to get there," Mert says. His dog charged the island, swam ashore panting, and the great mother birds, rocs of American mythology, drove him right back. "That dog come out of there like he was shot from a cannon."

We see them all about the harbor, on the lobster sheds and around the bait barrels, flying in high arcs above the town dumps; this is where they breed, where they come into the temple and are trained as neophytes, wisdom of their bodies to come to the right place at the right time, dealing the Moon Card at Beal's, and at Lester's, and go forth into this world age, to do what species black and white, over land and water, must do. Here Mother Moon and the Bitch Herself protects them until they are able to fly, scorns the ship and the rock, defends her nest from real estate values and cottages; then her work is done, the meat of the age is cooked, black crows, white wings over the bright glow of trash, birds fat enough to see that the death of the city is an astronomical event, a stench itself in time. They who fear not diving into the decay of their own organs are not repulsed.

Mr. Schoppee says: "I don't want oil any more than the next man, but this area needs something for industry to get us over this clam thing. No sir, clams are not gonna last forever, even here, and pulpwood is the same kind of deal; every year they cut deeper and deeper into the forest; every year there are fewer and fewer people cutting, the people who cut the year before are working in the factory. This is a depressed area and we need something. Maybe it's oil. One spill, I know, and all the marine life's gone. I'm not saying we should take that chance, but we need something."

As the world age cuts into the forest, deeper and deeper into myth, Frederick Turner changes places with Robert Graves, and the American historian on the frontier is a Druid, recalling the original names of the Northern forests, the practical elements of magic, and the archaic mills, to derive the occult meaning, land whose process reveals that the meaning of the Earth: is, in its place, the Earth. They always talk about themselves as though it really were a backward area, instead of where the sun rises. They pretend they don't know what's happening, but clams alone aren't the Jonesboro River, and there's more to the land itself than the stumpage on Ben Richardson's farm.

"I take a great breath of air when I come back across the line into this state," Mert says. "I just hope we can keep it that way. I'd rather have the tourists than the oil, even if this is one of the first places that's gonna go."

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"They want coast, not farms, inland," Lester adds.

"You know," says Harvey Moore. "One of those summer people was asking my sister how she could stand it here during the winter and she said, 'Well, once the summer people and the mosquitoes leave, why it's just right bearable.'"

Mert: "When I called Connie Jellison about that gull, I knew she was gonna put it in the paper. Now I was thinking about who reads the Bar Harbor paper, and it's lots of summer people, that's who. I tell you, we can get those city folks riled up and we've got something, those rich old ladies in the Audubon Society, they can raise quite a fuss. That poor devil that came aboard my boat. He WAS a MESS." Mert thinks about it a bit, then continues: "It's not the same here as it used to be. The balance must be upset or something. Take Blue Hill Bay. A few years ago you were getting some lobsters and scallops from there; now there's nothing. I guess the flounders that were there were feeding on worms and scalpings; they drug up all the flounders and the scalpings have taken over."

Lester: "It happens in water faster than it does on land. Least, that's what I hear."

In August the fields, the barrens fill with blueberries, is all of Washington County, metropolis of the one agency. Yes, the balance is upset, but I believe in consciousness in the universe, I believe that the ultimate product is the return to sanity. "The dinosaurs didn't return to sanity," says the Park Director, but he still doesn't understand what I mean. Of course they did, we can see it all around us; Turner's line has been drawn a million times and crossed a million times, and not just on the Moon in low drain tides, and not just coming back the other way. The frontier is the containment of the web. It depends on where you built your house in the first place, and how the landscape, like the skyline, from any vista is irrevocable, as the eclipse, as it is where we are, not where they are. There is no line in American history. Until I draw one now.

The dinosaurs are present; how else do we evoke the invisible Machias, and the Machias River, how else do we find the bones of our fathers and their fathers in the muds?, or the roll of wood for the last time carried by the body of the Machias, log drive to Machiasport? The line: he did work common to his era. We all did.

And the West disjoins from the East somewhere on the great circle to become the rest of America, the South Seas, Mao's and Indo- China, Europe, and comes back around thru New Foundland, arriving downhome where the Earth is, at the dawn. There are so many lines that we cross in our coming and going, at the frontier of one world, stumbling over into the interspecific, the shag and city folk, of another.

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[from Chapter Ten, THE LONG BODY OF THE DREAM]

I speak to the children of mythical world-endings, children with too many children, children dying in paradise, lying in the warm afternoon appletree shadows of their own exhausted sperm.

How we have lost or won, or lost and won, and what? How we can't get anywhere without the body, we can't even stay born, and without the Earth: no one. So the doom-spieler comes to steal our bodies, our lives, he who is and always has been the body-snatchers, the planetary thief.

Children drilled and nagged to insanity in the U.S. Army, Kill!, Kill!, as though a parent telling them to clean up their toys, not to, to, and childhood all over again, except no escape, escape thru a series of underground tunnels to Sweden, the sun shines again. There is world, in the pasture. However dirty, the river runs, carrying the snows of this millenium, into the eternal sea. And green horsetails sprout again in the swamp with fiddleheads, bursting an inner yolk of sun, perfection, primitive pine cones still alive (1970 A.D.) on the face of the Earth.

Or world comes to an end in a science fiction movie: whirlwinds eating up R.F.D., giant waves tumbling down on the apartment buildings, washing away the cities, fish drowning in the streets of New York. The giant spaceship rises from the mountain hideout, Noah's lands beneath; it carries the only terrestrials left. Lands upon the dark comet world whose gravity has torn the Earth apart. Lands in unfarmed farm country, amazed, where the snowy mountains drain into a valley, no evolution beyond paradise, world that will now orbit the sun. (*When Worlds Collide*, late movie).

Here is the man who is supposed to be the Earth poet. Standing in his garden, damning those sacred mysteries which lie behind all that is genatrix. Weary, weary, he steals what life is left. And blames them all. The vast American combine, of which he is integrally a part. One too many years his garden has grown without the sacred garden to sustain it. He works tiredly with shovel and hoe. The children have invaded the circle in their bathing suits; the hens have invaded it. He has no energy left. 'I Earth poet,' he claims, as if to salvage that single honor. 'I in my garden. I in the mulch, in my own shit. I growing great roots and vegetables. All around me, I in my spawn.'

There's only one poison, and it lies in psyche, the counter-motion of cell-growth, as we deal in language, not things. In our hearts the Earth is fertilized, or is not; in our hearts the water for the fields is stored, and the invention of wind and water mills brings our love home. When we die the world dies, make no mistake about it.

And I sympathize with Ed Sanders on mini-skirted grade-school teachers talking ee-college-gee, training classes of children to cough on Earth day, all together now, to show that

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the air's bad, at attention, like during the national anthem. When we die the world dies, not before, not after. And those who use statistics (quantification, they call it) have given up any last chance for meaning. Once you turn mathematics on me, baby, I *know* you don't care. We deal in language, not things.

And Mr. doom doom doom doom is sorry still we didn't all get it during the Cuban crisis; eight long years he has had to go on living, watching the sky for signs, that cult of the mushroom cloud and the air raid siren. Nothing better than to take the rest of us with you, an insanity equal to Hitler at Los Alamos, a lebensraum no less than the whole macrophysical Earth.

It's not happening. No one reaches out of the grave with clammy hands to pull us all in. We are separate beings with separate consequences and separate dooms. We don't have to be liberated. We don't have to buy salvation. If I hear the dance in my body and feel the living motion, however distant in the archetype, working centuries away to create me, to live me, then the puppet-strings fall away, I don't have to stand in the hot sun debating transits with you. At least offer me some poison American lemonade so we can get it over with. You can have your doom, your poison oceans and private bomb shelter.

'But,' you say with a curled smile, 'we've killed ourselves already; it's done with, finis. The question is whether to tell the public and have a mass panic, or whether to try to get them doing something.'

There are only so many who can fit on the ship to Xyra, and if you're, we're doomed, that little bit of tail-wagging isn't going to help. Even if that comet does hit the Earth and free you of your own private hell, who cares: I still don't have to go where you're going.

What I'm saying is: there's no great equalizer, and thank god there's no safe political issue, like environment. Because how can you tell the difference, in that great Darwinian embryological tunnel, between them and us. Neither of us look like Dante's demons. The bad guys waiting on the deserted beaches to rape someone don't have spots. Welcome to the madhouse, and its open skies, of Texas, and beyond. You're in for the asking. And, anyway, you're in.

I hate to put it this way: but we've been hanging by an awfully slim protein code for 3 million years. And we lie on both sides of it, in a universe of substance like wet light. It's all those beautiful green maple and elm trees, the world around us, primitive masterpieces, crocodiles of a man.

It's that moment for Arthur Penn when Arlo suddenly doesn't have to worry about the draft; he doesn't have to do what he doesn't want to do, but now what does he want to do? What are you going to do if that comet doesn't hit? How are you going to get out of it alive?

Tansy growing in the driveway, sweet smell of a water we

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don't drink anymore, hidden in caves, children sit in the road selling apple cider, lemon, tansy?, ade. The horses graze on the bedrock. The root, even without sugar, is sweet. The bee in the candy shop. The succulent botany of the sea.

The chickens rush in waves like a wind. Old Man Sun sweats in the fields. God is it an old old time. we live in. The city may be new. The children are young, eternally so. But we are so old: can't you face that, the wisdom of your age?

You shake your head.

'It's all over. We've killed ourselves.' And once again for the reporters. Except they're not due till doomsday itself.

It's the start of remembering that we do remember other lives, as we shall remember this one.

And we know what is happening. So. clearly.

we.have.been.here.before we.have.been.here.before

The despair I feel today is personal: these cars rushing thru Maine to sight-see, piling the cognate upon itself. They couldn't stay at home; they couldn't conserve their energy; they are so tired they can't even see what is happening to them, carrying those camera-eyes around their necks to prove that Columbus discovered America, which he didn't, nor did they.

Traffic jam like clotted blood, jamming at the bridges on Universal Route One. It's not like the lemmings; they won't drive off the edge of the continent into the sea. Calmly they will turn around and go back, and that's worse than doom; that's what hell really is. And hot, and sweating, and machines overheating. A chain of restaurants arises named Dante's Inferno, steaks on hot coals attended by chefs with pitchforks; the damned, meat-eaters all, turn in insomnia and indigestion, lobsters crawling in their gullet, sneezing because, as the ad says, Dante's Inferno is now air-conditioned. But what about Newark?, and the black summer that LeRoi Jones called "the system of Dante's Hell." What about the history of America, after America?: not the white man; he prefers Billy Graham, and cars with *Jesus Saves* loudspeakers, and one more political campaign; he'd like to bring it all down on our heads, like saying: you can have your revolution, but you're going to die too. The Western World thinks it's the whole cosmic show.

Is that what the Earth poet wants to be now, tired with briefcase full of commercial studiowork, commuting between hell and back, like a hero? Does he want to stick his finger up its ass now that he's spent and wants no part of a vision he can't have?

The Humpty-Dumpty Potato Chip truck has turned over, lies in a ditch by the road. The driver and Humpty Dumpty escaped. A drunk has run into the powerlines taking down the whole of Mitchell Road, lies stunned at the steering wheel; the curious come out of their darkened houses to look.

I remember the old summers too: the stringbeans in Westport, the puppet ghost and girls on bikes in Poughkeepsie, the

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old shells of the Atlantic Ocean on Long Beach, we walked to thru misty morning woods, our feet in the dew, and Judy on her bike, maple fruit, samara, on our noses. It is not that nostalgia is hell. I am rising like fire from maple mornings and toasted almond popsicles and colored beachballs and pin-striped baseball uniforms. The vision is implanted on my skull, not in America, and turning thru these sun-broken shards like a spinning top I cast off the purest silvers: summer, water, heat, motion. You will be poisoned only if you grow back, if you go back into the thing itself. You can't just lie around: it's got to explode, again and again. And when so much is happening, when people are swimming naked in the reflecting pool and dancing in Georgia, and we're making love on the shadows of the living room floor, and cool as stars, hot as stars, in their distance, in our nearness to the center of, thru our centers, how can it even interest you to talk of doom?

The dick-lions, the joe-jorgeysuns: don't kid yourself, these sweety pies are the runts of the system, the finks of the bosses, do-gooders who want to save everyone, the injuns especially, so it will look good on their records, who put on the radical the way some people put on after-shave lotion; that's where your whole earth is gone, into bogus votes expelling the CIA from anthropological associations, how the devil leaves disguised as himself, so no one'll know he's still there. If only they could stay at home and watch their eggs hatch, screw around a little, forget those fucking endless campus politics and egotrips. And they call it positivism, pretending it's really there. Tell that to the next Indian you see, Joe.

Goddamn traffic jam. On the radio: Eric Burden: *spill the wine/spill the wine/spill the wine.*

Steam and dust rising, my own sweat; oh do I want to get home and stand in the lettuce patch and wait even till doomsday. It's my own.

And then:

I'd have nothing to show babe
If you should go 'way.

It's all hitting at approximately the same point, though I can't say..... Begin with: YOU DON'T NEED CAUSALITY. The geomagnetic electroastrological gravitational-synchronous field of the Earth says: IT'S ALL CONNECTED, without connections. It's beautifully sudden: that a vision is only a time and a place, a set, as with fishing gear, stop-twine, on yourself. It's a whirlygig swoop, ending in a knot or node. NOTHING IS ARBITRARY, but that's not quite good enough. It's not that nothing's arbitrary; it's that Pluto exerts no evident gravitational pull on the Earth that means that Pluto and the Earth exist in the same enmeshed interpenetrating system, are whirled from the same node in fire, and their set to each is objective and absolute; the Earth simply cannot get out of that time-lock. It is caught in a series of events which are wound in the long-body torso of the Solar System; it sees those events as thru a window, and Pluto, as Neptune, as Uranus, as even those nearer weights of Mars and Venus, is always there, looking in,

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the voyeur who does more than sight-see: sees. We see where we are. It is synchronous because way back then we all set our watches together and then left on different time scales, and in the end we're all supposed to meet at the top of the empire state building at the same time, which means, the same place. And in the mean time we're all on different time, on different sectors of the outward-facing surface of the great sphere. These times are conjoined to each other; they are precisely the same, and the scale conversion is essentially and exactly those events happening in any single chronologos.

Which way you going Billy?
Or need I ask?

the way it happens, whether it happens or not, the radio slicing into my thoughts, says: it's true, keep going, they are our words, the voice of the master, spang behind the keys.

WE. ARE.ALL.ON. THE. SAME. TIME. We move to the beat because we hear it; we find ourselves listening thank god.

And what are we being brought to? What apocalypse? What vision, legion, clear as the hot white sun? I am speaking not just of missile crises and the power stored in dynamite and H and A and cobalt bombs, but in the power of the granite rock base, set as where it is, and the slippage of same, and the faults in same which would move mountains.

IT WAS NOT SO LONG AGO. Time only seems to us as it is invested in the biological. We can also sit as stone sits. As cold and contemplative as a yogi, sit a million years. Time can pass as though it were not time. We can wait it out, and know finally that there is no difference between here and there, then and now, between absolute speed and absolute motionlessness, both of which typify the solid Earth. It is not just joining the secret society, or when worlds collide walking onto the new world, outliving this adventure too in the dungeon of the dormant: we were created out of an insane desire that we be here. We were born of the passion of gods, and the real fear is not the limited one, not the holocaust, ecological or otherwise, but that we shall fail the vision we know we have. Fail that and we die anyway. Achieve that and death is meaningless. This is the ageless wisdom, Joe. Which is to say: who *can* tell one time from another. As we are, let us live.

[from Chapter Twelve, THE BOOK OF MAN]

The ice begins to melt. This is not just a spring thaw, but how it was once and will not be again until the metals boil off. It is not the Middle Ages I speak of, though then as before then the symbolism of all previous worlds, alphabets, astrologies, were melted down into an occult we will seek to unravel in cities for the rest of our history. And burned libraries and

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lost dendrons and ever oak rings.

It is the moorlog.

Do you know the moorlog? the buried forests of the North Sea. Willow. Pine. Birch and Alder. Oak Hazel. Periwinkles nesting in the Baltic. The Yoldia open like a gash. And the ancient Ancylus Lake.

Litorina litorea. The seas filling with inland waters. Isostatic, the land buoyant, its weight melting off. Little does it realize, as the final ounces pour from its back and the old gods yawn in vast relief on Olympus and in caves to the depths of Neptune and Pluto, that in the face of masked warriors, dressed as animals, perhaps, perhaps animals dressed as peoples, awaking from their own, and the accompanying garments of the Pleistocene as from a long dream, having this property, that once born they can no longer be put to a death that is not their rebirth in greater numbers.

Now you come. You ask me to write of this. Wake me up when I am tired. At sunset. Your voice in my biology, my stomach bubbling so I am dizzy with the tension to get it off the surface, out. I speak of peoples I know nothing of, closer than my own.

Lake-dwellers. Forest men. And the ancestors of forest men. As the occult surrounded them like a deck of playing cards. Ambush. They threw down famous tools. Little does the planet know, its land mass, that throwing off the weight of glacier; glacier has left behind something more than moraine, less than man; more than enough. That famous chemical such that when you strike it it burns forever, once the match is lit, the material caught touches all, will not go out until it reaches the end of the universe, and even then not until it has changed it into another thing in which it is no longer fire. Small and local as it seems at first, pretending to be psychic, until it has burned everything, which isn't the end; to burn is to alter. Consciousness was the giant that awoke from its initiation in ice, its hair wet from more than dew, bathing in the rivers Baltic and Jutland shoulders throw off, and found Cro Magnon with his precious needles, caves lit with animals, icons, glowing in the paints of a secondary technology. This warrior: a powerful swimmer, an emergent dancer, he does not drown, but clings to a knowledge, lives in the original wooden house.

And his is the weight that backs and counters the overflow of the seas, 200, 300 feet the water rises as the water joins the water, into Baltic and Bering, the sorceror gone mad: but it *is* spring after two million years of winter, thaw in the edge of the planet's cutting knife, having made Pinochio. Neither too late nor too soon, but of a thermostatic control that precedes it like loaded dice.

The weight is replaced, the continents float upon the corelands, men with wooden boats dugout the trees of the alphabet, become prospectors on high seas: driven inland to where the balance of mountain and basin produces fishermen, bird-

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hunters. Garfish cod and flounder. Scaup-duck and scooter. Eider and great black-backed gull. Auk and roach. Rudd and spurdog. Maglemosians. Tardenoisians. Peoples who discovered, and ultimately, that there was a route out of a darkness not self-imposed (though therein derived), not knowing that the darkness went back before, whirling in murky smoke and cloud-tops, into the chain-gangs and prisons of cultures locked in step to the still-growing intelligence, still-burning accrescing sun (even as behind the mask it dies).

They pursued the herds into the mammoths of Siberia, the horses of America, until; some awoke as Yahgan, with harpoons, leaving the second tracks of the emu in the Australian earth say 5000 years ago, until Captain Cook, and the Boer Wars erased that, quelled the last paleolithic fires, and Pizarro laid that second blanket, more like a shroud, and even the horses came wearing the masks of secondary imagination, gerry-mander of the mind: emu tracks in the cerebellum, and churingas, bahos of the south, from bloodline to bloodline, as in marriage, I take you, you take me, our trees join, the feathers of sacred birds, red where there is red, yellow likewise, as in sign language no node is wasted. Until. But the boats, the stars navigated by, Beth-Luis-Nion, Orion in Ireland, Irland, dugout above, the path back across, so that beneath men were drowning forests, coelecanths, wonder of wonders, the last world covered half by water, the Neanderthal burial under the kitchen of morning, and boatmen in Holland look down into the water, drink deep into the faces of their ancestors, seas which were once land, lands which are now seas.

This is more than we think it was. This is the far country we forget in our honor of the icemen, plowmen, Pleistocene hunters and Neolithic farmers. Who were the first adzemen, axe-men, who turned the microlith back into the eye of the wood, found the tang in needlepoint? Who discovered the old unwritten books of bone? Who led the goat from the wilderness?

"The withdrawal of the Pleistocene ice-sheets was an event of far-reaching importance. It produced fundamental climatic, floral and faunal changes on a grand scale; it released such vast quantities of melt-water and removed so great a stress from the earth's crust as to induce geographical changes of the first order; and it made wide stretches of Northern Europe available for the settlement of man."

The open-land hunters of Predmost, and of the steppeland East, the rivers South into Russia, found the world disappearing at their feet, the forest in motion, and storms of a sort they had never known, billions of oak and maples seeds blown in a fine rain, endless like insects, and insects, a dark forest no one had predicted, no soothsayer of their peoples. In Delaware and Holland, East by way of West, West by way of East. The dead fishermen, boots pulling their bodies down, raised from the ankles up by the gases of watery decay, rode the tides standing up into shore, where the return of the

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dead was foretold, but not in such numbers, not by intersection of natural and phenomenal worlds. They were surrounded by a medium, in an obscurity, they could find no way out of. They cut, they wedged, they hafted, they understood that no one would ever remember them. A more conscious hand moved as fire thru the stars.

The Earth was getting warmer. Was getting warmer. And this fire would not go out. The middle ages of the universe itself were passed, light years away, but these six thousand years spent in Europe were a prelude to local geography, a return to the occult arts. And Africa remained Bantu, China grew, Australia, wound and rewound, its paths recrossing. America grew. In Europe: the lake-dwellers, fishermen, the Maglemosians, or bog-peoples who found their way out of the inner darkness and recovered the classical wisdom of the Magdalenian, built the first Mediterranean cities, in the sense of ditches, round towers, boundary stones, as the Earth grew warmer, and thunder laid the calendar stone.

Though the sun burned in the sky, behind that masked face - a secret, a suspicion we struggle to the key of today, with our lives at stake, ultimately, that a pattern or inner rhythm of sunspots, orders the ice, which was once sun, and remains the post-hypnotic note of matter, an energy or sympathy which holds, even as an iron hand hold back the glaciers yet: the Northland is marked with fjords and icebergs, the adze is still the tool of tools, metal the shapeless shape. And the weight on the Earth is no longer glacier, is city: at New Bedford, body of the whale.

Axe cultures. Harpoon cultures. Awl and needle makers. Magicians. Petroglyphs. Cultures engraving fishbeetles on their harpoons. Trapezoidal cultures, seeking the power of opposite sharp edges, cutting into tiny tools along the Euclidean faces, the stance of the ape. The juke box plays April Showers, Greensleeves; the jokers lie asleep beneath wooden superstructure, and behind all the other musics, the dark interstellar sound of "The Sorceror's Apprentice".

Thru the Mesolithic mirror into the pools of Archaic in the Eastern Woodlands of America, Algonquian and Penobscot peoples who, in Maine, gave birth to invaders in giant ships, and the Neolithic, the soothsayers of Rockland, and quarrymen who abandon the cities and take to clamming, fishing, shooting gulls and ducks, and trapping muskrats.

The Mesolithic is the great fish-haul, and the first such haul of the ancestral body of man's own oogenesis, piscis, from the dark churning sea, to Hesiod: Okeanos, Jung's Psyche, dwelling place not only of Neptune but Lucifer, and the dolphins of Atlantic. 22 species of bird, 8 of fish, innumerable varieties of shellfish. As well as elk, beaver, and wild pig. Polished greenstone axes. And the chronometer varved by rough water. Moor and fen.

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We were raised by a witch of the forest, who, in the dark hours of night, examined her own body for signs of illness and macrocosm, fled from imaginary terrors of the circle, which were not imaginary but inherited, and passed that legacy onto us as the dreaming kids. Our culture must be at least as deep as our fear if we are to survive it, best answer for the black and radical arts, the Maglemosian underground. Otherwise we will always be vulnerable, and danger will surely, given the enduring time of the universe, come from that direction; as in the science fiction book where our rockets are no threat to the eternity of stars, our telepathy and madness could destroy suns and planets, our uncontrolled psychism, probing for its unkindled consciousness, sacking and haunting the astral: unless we learn to control fire, in our mind.

We sit on the edge of the forest, and the visions come in alphabets, the blue sun dies behind the yellow sun, is also dyed by the yellow sun, and the inner juices of haw and cloudberry. Who is the lord Horus who appears at the end of this time, building the first towers out of stone? What is his name that he wears copper beads found in a fire? Who are these Thoth figures, these words, sailing South, under secret emblems, from Jutland and Zealand, into the Egyptian valley? Who are these beings dancing with skeletons and skulls, carrying the death forma, and their dead, burning a minute sun, proclaiming their ancestry in the North, in speech, and that they have seen the last Neanderthals of their own half-psyches, wandering across lands that are now sea?

I think we are the birth, and afterbirth, of Mesolithic peoples, and a certain dervish joy that began then, good wines and breads, seductive and narrative dances, continues on that fuel. After the ice man flourished in Asia and Northern Europe, built houses of wood and lived by the water, before he returned to write the book we are all reading, and now the last of them, the fishermen, those lights, come in at sunset, simultaneous with the first stars. Do you know what is happening. Do you begin to see the edges of it? We are becoming more conscious. We can see the future, its image a red sun, a transfiguration at the brink of manhood, to take our dreams seriously, pass beyond the galaxy, to those who have haunted us. Only a madman would break the circle now. The fishing vessel made of wood, the floating ice: that madness hereditary. More than that. We must bear this mystery, this midworld, to its solver and origin.

[from Chapter Thirteen, THE JELLYFISH]

The China Dream

We are in a very green land that is large, almost endless. We are in a much bigger place than we have ever been in, for

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all these fields are unused and lie outside of history, external to those conditions which are imposed on us: this is pure fertile possible space.

Earlier in the dream we came on a long plane ride, like a spaceflight. Having attained an incredible speed we pierced the surrounding air and entered a world as omnipresent as the fourth dimension, or myth itself.

I have never seen a land so large; it goes on forever, earthlike, but completely unsettled; it houses the billions, working like microscopic life in those fields.

We were graciously received in China and taken to an old hotel, pre-European, imperial in its wealth and treasure, since turned over to the people.

In the day, long walks across fields laid upon the interior of space. We would hike for miles thru beautiful pastures, unchanged climax forests, and come out by other endless fields: a planet the size of Neptune lying within the earth, tapped as extrasensory perception, an endless well of fresh inland water, an acreage of rich soil wound on the spindle of the ages.

The fields were ringed by the mountains of China. And beyond the mountains, more fields. If the universe is endless, creation is, planet is. And the amount of genetic materia is enough, green algae-oid plasm, to colonize even the dense interior of stone.

This is what China was: a continent larger than all of mankind, mysterious and vast. Like the dream-space itself, China, we knew, was gigantic, but we had never accurately gauged her size, and now we were dealing with something whose proportions exceded all our experience. We could not conceive of a world this big, hidden anywhere. And yet we dream. Writ large against the small.

In the fields a kind of intangible joy and bounty seized us, and we ran up and down hills, knowing there was no end, even to pleasure. We played ball; it could not be baseball, for there were no boundaries, and the positions were non-Euclidean. We played with a big bright-colored Chinese ball; at least it had Chinese writing on it, and its outer layers unwound in the sun as it drifted above us, always new colors and writing beneath, not just the sayings of Mao, as everyone thought, but a total philosophy of the world's regions and powers, and the ball never changed or lost size.

Later we were taken to the inhabited spaces, and we saw them as clearly as holograph etching, though in a great distance. There were shelved hills, as in pre-Columbian America, and upon the sides of those hills the people were living their lives, farming, giving birth, celebrating, building the temples. We could see all the events, a trillion or more people enacting them, and each one distinctly visible. It was a world of such beauty and activity we could not approach it. More minute and contained than a microscopic landscape. Larger than the cities of man. A figure both of humanity and eternity. We never knew

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there were so many Chinese; we never knew there was so much of anything, until we ourselves were discovered to be there, and one of them. Walking along the Great Wall, looking down into history on either side. To the East: the East. To the West: the West. And nowhere else. A vision of the legions. A vision of the pyramid-builders, Chinese also, as the Indians were, of Teotihuacan. America is China too, obscure outer province of the Red Empire, as Redmen, as all peoples in migration until the books they are carrying turn into the law.

The fields we were walking I have dreamed of before. They are the great fields that lie at the beginning of the Earth, again at the onset of the Pleistocene, totally inhabitable, totally uninhabited, the potential farm country of everything. To which the aliens bring by flying saucer the seed children, the adamites, who will become the maoists, the monkey-men. Children of Confucius, Latin Chinese sage of even another world. Not even the jungles of Venus, but some distant Betelguese star.

Suddenly the Ice-Age is over, the glaciers retreat, and we see how green it is. And we aren't even here yet.

How green the world inside the water-droplet, which did not exist for two millenia. A world almost as real, as certain as this one.

The freshets, the threshing of atomic power stacked up to the individual Angstrom of space.

At this point we are being shown around by an important local figure, who turns out later to have been Mao himself. He is describing the conceivable future development of this region. It is all technologically possible; the businessmen in our party nod; it is obviously beyond America; it is obviously going to happen. And clean as a summer rain.

We reach a hill, and the elder people in the party are so elated that they begin to run up and down it, as though doused by the Fountain of Youth. I find myself wondering how old American industrialists could be so quickly converted, but then I think of new markets, and the fact that if they were born here they would be Chinamen. They know no nation, these red-baiters, these dispossessed. They are bought by wizardry itself, and a firm military presence. Mao doesn't flaunt this; he doesn't have to; from his historic vantage the whole Earth lies as susceptible and immediate as a tiny frog-pond, the gleaming puddle of blue and green that lies beneath the moon, reflecting her image as a candle in mercury.

At the top of the hill is an old Aztec ballcourt, of the type archaeologists never knew to be in China. Beyond that a marble ship upon a river to which the workers come to picnic and lunch. The birds are as bright as in any South American jungle. Even brighter. As in South American Indian myth. Mao says we don't need phenomenology, for all that are phenomena. China is not overpopulated, he says; we have emerged upon an eternal event. Mankind.

One of the members of our party suddenly turns out to be

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Mr. Grady, the next-door neighbor whose house burned down this last winter. He is a tall American disciplinarian who used to teach at the high school, now works full-time as a carpenter. He comes to the dream of China as blaring American materialism, with a little political hooliganism thrown in. Snowmobiles, boats, trailers, campers in his frontyard, *Love It Or Leave It* sticker on his car. An attitude passed even thru his kids, who claim the world, redneck-like. Not purposely harmful, but mindless as America is in rising to be herself, suburban, non-large, non-vast, for all the New World that is here and always was, and outsizes the continent they would so reduce. Hence suddenly we are in China, against our real girth.

Mr. Grady gives his all for what he thinks America is, and he's just the type who gets screwed by what America really is, beneath the flag. He's not the guy you'd expect to see on this sort of trip, or outside of America (except as part of some army), but this trip is almost like: when they take a bunch of Mainers down South to look at property in Florida they might retire to.

He comes walking up to me and says: "This is really beautiful. They really have something here." He looks around in wonder at the size, the pure luxury of property, universal lineless property, swallowing even its pollutions into a fat healthy egg.

And then I say to him: "I guess you know it's communist."

He looks around to make sure no one is looking and then says to me in a hushed excited voice: "It doesn't matter. I think they know what they're doing."

Looking out all around I see that everything is so soft and so green it could melt, transform, and go on eternally melting, transforming, without diminishment, the Earth's perfect Child. The landscape is glowing with the radioactivity of conscious sentient life, moral at last. And I had the sense that even though this might not be China, and Mao might not be Mao, that this was the land the radicals spoke of in seizing the name of China. The new New World. Our craft had dissolved into water at the boundary, leaving us here, as if from within, the grassy emerald city. Everything was left behind. And as predicted, China would one day cover the whole world, but the way in which it finally happened, and what China finally was, they never knew.

[from Chapter Fourteen, BURIAL OF THE JELLYFISH; RETURN OF CHAMPLAIN TO THE OUTER WATERS]

The young milkweeds rise from the perennial root. Blue false indigo. Makino. Apple. Bushes and trees, planted and cultivated once, now gone wild, and Virginia creeper climbing and choking their dead branches.

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We have bought a house. We cannot control it. Snow and wind and rain, under the shingles damp, and fungus on the inside; rotting timbers under the barn and broken glass scattered everywhere. Rusty cans and thorns in the raspberry bushes, and a brown drought, this close to the sea, wild and prehuman.

The pages of an obscure history book turn, we cannot read them, upside down and backwards, a dream that keeps happening in the Middle West of a country, down and behind where the real cities are, as the backdoor to Toledo and Terre Haute remembered as history lost in a previous existence, even as our lives are surrounded by a largeness we feed off of, feed, and know nothing of, hence the drift of our concerns against it, as drift at sea, driftworld upon star-rope, worn as materia can be, never as hydrogen.

We are pressed up against an enigma, and the apple tree, sitting in the shade talking on an American holiday the Declaration wasn't written on, but the sound of firecrackers in the sodden afternoon, occasionally the wind in the trees. how hot it is, and how when we awake, this second year in the house, we don't understand all over again, as children, why we are here, or the woman, marriage: and we sit here (Robin naps in the room above), quietly as a thousand times before, in Massachusetts, and Arizona, and Colorado, and Michigan, discussing our lives, like the living. Yes, we have closed off the raw goldenrod opening of sun that burst in from a remote star a Sunday ago, revealing a dream city, and a whirling *who am i* angel, part of me. This far from the day in Denver we were married, and before that the cabin in whose high grass we sat, and drank our coffee, the day beginning of a brilliant sun in the aspens. The imago remains, vista of this place asleep and fixed, I see from the woods as I walk along their edge trying to find where White Kitty has hidden her kitten, and look back, from behind the discovery, to house and barn, and our life.

This sits, now we sit within it, as you return from the field and hedges not finding her either. Piece of land whose history eludes, whose principle of growth does not pertain to us at all, but land we have hoed and planted, watered and worked in, and we are here, far from any black mountains of our time, or ideal experiments in living, alone, and the people around us are america, with their flags up, their grass green, their pavement blacktop hot as july 4 hell, and it has been this way everywhere, every where, ever since. Now that we have chosen, the place itself is nothing but choice. We live nowhere, as the world in motion, the export to the city, the endless stream of tourists *from*, attests.

We have fallen on the wild side of time. We have placed ourselves in high grass, and now it is certain we are only waiting for what will happen. The questions in America, that keep us from working dawn to dawn, and waste out time, our

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ground, and sometimes neither working nor praying but lying in the sun, an experiment in living ourselves, at the outer edge of time.

We can't be here forever, but until we leave we are here forever, so do we trim this appletree or let it go wild?, reclaim the land and trees from Virginia creeper, and clean out the tons of cans and bottles from the raspberries? When blacktop will cover this, a wild plant more prolific than milkweed, more clonal than willow, attracted by root to stone like spurge, the Indian saw blowing thru the dense rising sun from the East, so dense it obscured the sun, and not locusts, and now returns, as if directionless, from the setting sun in the West. Destroying our patience on the warpath, subsuming the single herb garden, and the medicine of one man, in numbers, if you do lie around on July 4 in hell.

Time halts. We buy a wading pool for Robin, with all the animals of the deep ocean painted on its blue, and the utterly clear hose-water filling it. I pull the wood from a heap, cut it with an axe, heavy under the sun, its weight also my life, use it to build a fire, and when the old friends come, after seven years, and talk, and walk in the milkweed, babies on our shoulders, to the edge of the marsh. These friends, off the road, stop for lunch, and are gone, the sense of a longer talk the hidden brook we seek, the work together we might do, we still do, as time does wait on prerogative. We wait, but the trees grow ripe and there is another time surrounding us. As America changes, the headlines loud and red, golden sun milk on cereal in the morning, honey in the "Oak Openings" of Cooper, which sits on the breakfast table in place of the newspapers, and he editorializes, about America, which contains the power, which can be destroyed from within. Teaching beneath the dying elms of Portland, an older city, the buildings as new as false, the school itself a colossal fraud, public money, but nobody knows any better, or how to stop the train, we are all on, as a vessel headed for the banks, off both coasts, salmon as well as cod, Robin lying half-asleep on his mattress he has been weaned to from the crib, staring out the window, at the trees high above him, saying the words he knows. The soup cooked tonight has little insects in it, from the millet whose jar they had entered, and bred, boiled in with the vegetables, floating to the top of the broth. We are beyond vulnerability; we eat it anyway; this is the meaning we are coming to, for years of reading those ethnobotanies and wandering in the textual forests of america, end to urban fears, and in all that dirt.

In the air there is word of ballet dancers on the fabled islands. The sedum and bunge spread, their juicy leaves, across the dry ground. But the sun hangs in the dirty window of the barn room, on ripped-up planks and plaster, where we had meant to build a room for the summer, a window to see out of where we are, as to sit in a magical vantage. Is not the

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dancers on the island, for wedged in time you can neither go backwards nor forwards, and wealth is simply the decay of the grapes Champlain knew, the cod off Cape Elizabeth, not so long ago. At least it's not a broadway theatre barn; at least it awaits the return of the bacchi, in whatever guise, from their apple orchards in the North.

There is no sense of what we are here for. But the sky tonight is as blue as it has ever been.

* * *

The moon is a wonder that we can see the map of a whole hemisphere, head-on, an absolute location, or spiritual fix. The mountains of the moon.

* * *

The barn remains night, day upon day, and there is no rain. And those who would have fixed it have gone also to the North, or have moved into the city itself, like cockroaches, following the expulsion from small towns. But the sunflowers are growing taller by light, past the garage window, though something wild digs in the garden at night, and returns to the woods, tears of frustration in Lindy's eyes, we cannot read the signs, and still there's no one to talk to and we sit alone on the grass under the overgrown branches and I toss tiny apples at the hole in the birdhouse I hung too late for nesting, knocking against the hollow wood, one or two into the blackness like a whisper. We discuss the whole world, as if it were out there, around us, we on this little slice of a one-time farm, its histories scrambled and tangled, even the weeds going in different directions, counterpurposes buried beneath them, rocks and wood, boundaries of incomplete or abandoned objects, they too were going nowhere on july 4, and the blankness oppressive. We can't tell who did what when, or even what we are doing presently, we who thought we would do so much, who have done absolutely nothing, but Robin has grown here, and we have made books, and read books, even as herbals are made, and birds and seeds and insects, in generative process. Something happens everywhere, or everything that happens needs a place, and for that reason nothing is lost, the omnipresence of aboriginal and colonial america. We still live the way we always have. And the land around us: time has foreclosed, as sunset, on all those neighbors, and they have cut lines thru the farm they are blind to as pieslices, creating property out of the old ranges, getting their heads into their lawns and blacktop, the way it is, and the way we are, not even knowing what it would be like, as we may never, to live in a real country, or even go to a market in economic peace. Not to fight the nameless disease for a day, or an hour, because the tea and measure comes from a hand not our own, a voice outside the bound, each voice having

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a native wisdom, cool beyond the ring.

We may never know, and yet the dumb daily photosynthetic is more bearable than lying in stupor with those who have invited us to their newly-bought cottage by the sea, all night jokes, and that's where the candle-lit ship of memory crossed, remembered again, or as Billie says, of the simplest, it too is so hard, and if only they'd admit it we'd have the premonition of calm, even in 100 degrees.

Robin drinks down the last of the grape juice, the toys are collected, the kittens are in, that are left, for Frodo is buried beneath the appletree, and with her all of Arizona, and time, as I said, lies like the whole moonworld on the other side of us, which for Robin is no time, splashing, for Lindy is her birthday, July 4. We are trying to see the life we have lived, and the distance a green light thru the berries and blossoms, a swallowing of sunlight by leaves without which, a barren torso chained to a rock.

What will we do, about anything, while we're alive, of what we promised, idealistic as we were, in seeking even friends and gardens, as if the gate were open, which man must open. And for no good reason we believed in the transpoignant self, given the density of the bath, and gold is king. Even if we do nothing, perhaps we have met expectations, of this place, for having been, haunting it as spooks haunt invisible words, for having lived, seeded, for the earth being what it is. The things we couldn't do, they couldn't have been done, as we see from outside, and those who move stars, but stars, they too burn out. Time lies beyond us, and we have not captured or conquered time, even our own. Eating at us as fine white worms we eat. And eat. And change our very being. And maybe we'll learn that lesson too, and find the wisemen, the city coming together as Indian tribes in the oak openings, not to fight the king, but as king. Where there is no democracy, and in name only, the prince returns, halfway round the world, the blackman hijacking an airplane to Argentina, to the black world, the stolen papers, that anybody but Sherlock Holmes knew were worthless, inflated, like confederate money, for those who are outside, who read the news in their heads.

* * *

The Indian has only come to seem important to the whiteman because he sits on time that way and allows the continent to pass in a silence that yields to the mystery. A dignity. To allow it to happen like the buzzing of flies. Nothing else is needed. A life.

None of us have the answer. The whiteman has not discovered content or wisdom in the Indian, except as the puppet whose wooden lips he moves with his own hands, subway wisdom. There is simply a fix unyielding, native, as the ethnobotany itself, becoming white man's knowledge, as potatoes have.

You ask why we don't write novels anymore, even compli-

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cated Faulknerian drama, and isn't it obvious? The story isn't there. There is nothing happening now, finally thank god at last, nothing at all. The form is dead, to tell a story about, that nothing is fed by winds from the outer darkness and there is no place to go, even for liberal climbers, who dreamt up, who loved the form. Model New England communities based on an imaginary, a fabled South. The complications are so absolute there is no time or mode to waste on plot. Nothing. It surrounds us. Why pretend time is happening. We don't know anymore. Our entanglements are vast, and here in our life what would seem to be arbitrary is the only thing, leaving what to be arbitrary? or simply *the story?* What do we have but our entanglement. Not just nothing but the immanescence of nothing, which like successive freak-outs, and even inclusive of those, BIG ACTION ON THE STREETS, goes on as calmly as a child playing with his toys, each one louder and more silent than the one before. Eventually we will perfect absolute motion, and that will be a (a single flower will be a) farm.

We don't write novels, aye?

Can't you see all around us coming in, the biggest wave of all.

[from Chapter Fifteen: THE PAINTER, THE COMEDIAN, AND THE HUMAN BEING]

Concerning the evolution of man on earth. The physical carapace in which he is born (Darwin's starfish-spider). For twenty-six years it explodes in growth, food, sleep, and general somatic pleasure. Carnival. Carnivore. Cornucopia. It marches in parades; it jitterbugs; it develops athletic prowess, technological awareness, makes money, visits fortune-tellers; it has *fun.*

There is a secret numeral in the body. When the ratio attains unity, the diagonal shifts to another direction. The child dies long before the body dies (even as the ape dies in childbirth, foetal, neonatus). As the body stops growing, healing is less swift. Ten or fifteen years from now, the dentist says, the gums will recede. Not because anything is wrong, but the dancing imp no longer wishes to rebuild everywhere. He is not a superman of other planets; he is not a confidante of gods in his spaceship. He isn't Don Juan. He can't save the world. Even his love has an obscure origin. Within, the volcanic processes are ceasing. But they refuse to believe; they go on ten, twenty, thirty years pretending it is still the same, joining bowling leagues, throwing parties, having fun. Or, anticapitalist, they seek revolution, international rock politics, firearms to replace the body's muted fire. A dwindling energy seeks, thru the handsome ruddy carapace, like a Kennedy or Bengali warrior, to prevail. A tennis court oath.

The sun within continues to burn, but its energy is no

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longer charged in free atoms. It is the body's consciousness that becomes real, and miscible, mixes with the walls of the room, the streets, the market place, the traffic between cities, the storms of the planet, the fires of the Van Allen Belt, the magnetic whip of the solar system; the skin of the human torso winds with the skin of distant stars and cosmoi until the meaning, like the size, is One. And this goes far beyond telepathy, astral projection, or psychic meditation. It assures us, not of immortality, but of one absolutely conscious endeavor, the same: not three weeks or seventy years that lie before us, in possible boredom; we approach the universal historic present, lotus blossom gender. Sorry to say, Mr. Jones, it will not go out in this lifetime or any other. Douse it, drug it, sleep thru it; the fire continues, and will, as the planet, for at least 40 trillion trillion years, until it transmutes, of its nature then, into some other burning thing. The earth will not come to an end (1914); the love letters of Warren Harding will be opened and read (2014), and will not change the past course of America, nor will the closing of the whorehouses (1814); the age of oil will wither (2114): and beyond that lies simply, the torso of man. The fire needs no fuel. The child's embryo-swift world is absorbed into the prana yolk. Food can no longer build Wonder Bread giants; its heydey is over. The planet glows with atomic salts, harmonically its texture: a note, reached sonically, with the body's own jelling, twines the life force with the cosmic force. And the dentist learns that, though the body's energies appear to dwindle, another three-day roly-poly wonder is born. We move from a person to a simultaneity of self, approaching the ancient blue alchemical drawing (or the pure red bloodule photograph of the planet, taken outside the forge). Boredom is the wish to consume more fuel, no more. When we can exist as a minnow, off nothing. Though the so-called hungry millions stand on the verge of the next century's greatest discovery (mind over matter, materializing carrots from the lingering irons of atmosphere, and telepathic nourishment from coronal seas of the sun), it will not save them, nor feed them, nor render Mao readable for even another fifty years. Like rice. The karmic shield is protection from nothing; the wars of liberation and wipeout simply jolt the yellow bird. And gold, the ally, the at-stake derivative, hammered into the thinnest sheets, is edible; one taste, the focused tuned tongue in the air, will render the body free of starvation for a lifetime. What then is the peasant to do, without his plow, his necessity?, the factories of comrades closed; how can the nation go on with everyone in vision and siesta? The answer is, beyond kali yoga, more worlds, and more worlds; no blow out stinkbug; the interplanetary community is upon us, bursting, but softly. As wild as the wind becomes, volcanic activity ceases; the teething is over; the planet lies in stasis; the karmic bands are taut, thick and trunklike, girdled by a vast downpour of starry sound; the sun sitting in the endless earth sky, suddenly is rendered clear.

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* * * *

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DAVID MELTZER

FROM EDEN BOOK

O snarled in mid-afternoon
Doom on every word
Squadrons of boos & hornets
Drift in blue cloudless sky
Shift as the warm wind blows

Man & motorbike
Buzz thru the redwood grove
Whining growl in the valley
Louder than the entire
Airborn dragonfly patrol

Midpoint now
Heart grows tighter
Nerves bunch-up more frequently
Snap like an alligator
At flapping hands
All waving goodbye

The earth is harder to break thru
The music richer
With history geology
The cardiogram sounds
Richter scales
Midpoint body
More cock-crazy than ever

Keep our garden green!

My children before TV
more concerned with two
turtles in a white porcelain
bowl, 2 rocks &
a couple raggy flags of lettuce
than a cartoon roughneck
fighting off the Dragon.

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Dogs barking in the hills.
Loud gossip. Pride of poets.
Chain-verbs broken apart
into abrupt explosions.
Band-saw gargling scream
like the motorbike
as it cuts down another tree
to make room for a swimmingpool
dug into hillside earth.

Sunlight grows brighter
for want of the forest.
Even Eden was a forest.
We return to daily.

So many ways to refuse
tidal black & white
waves of media smashing
brains down, pulping eyes,
slicing a smoking electric road
right down spine's center.

We have a garden in the backyard
as meager as you wish.
A grubby clump of radishes,
some brown-leafed dried-up spinach,
Fordhook lettuce nibbled to the roots,
chives, marjoram, basil, some
dillweed, garlic, sagging
tomato plants Safeway-bought
hang like martyrs on the cross,
powdery carrot-tops hopeless,
under-sun-fed.
We have a garden in the backyard
that teaches us what not to grow.
Without proper sunlight,
without proper light,
there is no growth,
no opening-up of bulbs & seeds.
See. You can dig up your own poems
out of the backyard garden.
Bibles are all over the place

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Wheel of my way. This afternoon
went back with Jane Ellen Harrison
to ancient Greek religion.
Also consulted with *Books In Print*
for Wilhelm Reich titles.
Also side-tracked by
a scrub bluejay attacking
the feeding platform with
nervous beak, squawks & yodels.
Words of kingship, godhood,
god-need hum along with wood-sounds:
birds & dragonflies, bees &
mosquitoes, — there's a hornet
caught between the windows,
banging against the glass,
buzzing. Jane says,
"The religious impulse is directed,
if I am right, primarily
to one end & one only,
the conservation & promotion of life."

O the words snarled in my head.
Mid-afternoon heat.
God dead along with other words.
I've gone backwards
to words revealing only what is left
of holiness, of ecstasy,
what is left of a moment,
left behind in books
bound to be heavy,
bound to hard carrying up to
Babel's tower-top
& there to see the great New World
bright & loud like Las Vegas
glaring spectrum rainbow color TV
rock & roll hillbilly screaming
sunrise & sunset twang
non-stop electricity power

O Jerusalem!
your babes all broken
in terror, yowling, bawling
wailing down below, grabbing

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at the sky to
pull up into Heaven O
Jerusalem O Eden!
rivers drying-up
birds & fish dying
man's rotting brain calcifying
poison breathes into the air
atomic mutant mammals city-crazed
flame-throwers in the night
devour diseased food
white as paper in assembly-line
lunch-counter gobbling-up
liver, kidney, heart instant death

O Heaven O Eden O Jerusalem
this afternoon I read Jane Ellen Harrison
in our Marin tree-house
in a valley serenaded by
birds & bees & motorbikes & band-saws & saw
trees topple & the tractors
rip out more earth
leveling soil for new towers,
new Babel foundations,
radio up full-blast,
stereo glass-breaking shatter
of new noise, new clatter
racket chatter of billions & billions of new humanbeings
raging & roaring about life on the planet
piled upon piles of arms & legs & tits &
cocks & cunts & mouths & sweat shit & piss
in piles in great Pyramids writhing
O new Egypt! rising up to greet white nuclear sun
blazing burning-out the green,
ray-gun fire of factories vomit death into the sky,
green shoots broken-down by steerage tonnage
human race in Dachau! Jerusalem!
O Heaven O Eden!
we are killing each other at last
we are killing each other again
we are clearing the earth of man
we are saying No as loud as we can
in cars crashing head-on on Freeways, skyways
smoking cancer, drinking strokes
raping land, fucking our women with more mewly kids
O Jerusalem O Heaven O Eden

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genes popping apart in freak collisions
death-dust sprinkled on all our food
stiff fish float topside on oil-slick seas
the seas retreat into desert
whose sand hardens into highways woven upon each other
& soon piled-up like great abstract golems
casting an endless shadow of moon-night
upon the ruined visions of Eden
of Heaven of Jerusalem

Oh but that's easy, she says.
He says it too.
It's easy.
Apocalypse is poetry's easiest song.
We're not scared, they sing together,
arms around each other.
We're not scared.
Let it roar.

Mid-afternoon white wine revery.
Put the book away with all the other books.
I am surrounded by books.
To my right, books.
Behind me, staring at my neck,
book-spines, not all of them read.
To my left, another shelf of books
& a window above them
where I see ivy,
drooping purple fuchsias like
pulp science-fiction plants,
thorny-edged succulents,
red & violet geraniums,
a gnarled modern-art treetrunk,
& a clear cloudless blue sky

rattles as the earth beneath me shakes
in sonic-boom clap of crashing space.
Books jiggle on the shelves.
Flowers tremble in the echo

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but hold firm, stand their ground.
Delicacy's secrets are there to see.
A subtle construction holds back Armageddon.
Fred Flintstone does a slow-burn
after being hit on the head
10 times with a thorny club.
Our kids watching it. Sunset.
Treehood & Susy, the two turtles,
get the last heat of sunlight
resting on their rocks
in the white porcelain bowl.

TWO CHINESE MERCHANTS, SAN FRANCISCO.

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Encuentro

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DONALD SCHENKER:

THE WORK IN PROGRESS: A Dream of The Dis-struction of a City

A race of wreckers is in the city They are taking it down as it was built Piece by piece Every screw removed All bolts wrenched loose Every nail pulled & straightened All glues melted Fastenings of every kind & sort unfastened

The machines are doing their best work Day & night without breakdown Without stop Composition Analyzers Detectors of Metals Determiners of Components Separators of Colors Night & day without breakdown of any sort Chemical Washers Material Segregators Sorters Indicators Reducers All working & cheerfully manned Each awaiting the decision

Like holy work the loving dismantling goes on A ring around the city from the outskirts inward From the edges of the Continent (it is the hope) inward Never has a race of man labored with such civilized intent So many employed in such joyful work So many men doing what pleases them

They are beginning at the top Television antennae unriveted Wire stripped from between walls & separated Conductor from insulation Roofing peeled carefully back Ceramic tile Stone & metal cornices Hauled down and carried to the Yards Drainpipes unbraced & lowered by ropes & carried by vehicles to the Preparatoriums along the roads through the vast Yards around the city Shingles Raingutters Flues & chimneys All paint sandblasted The dust gathered & separated by the machines The paint boxed according to its color & component quality preparatory to its final reduction Sand back to the sandblasting chamber Each box Cabinet Crate Steel band Container of any sort whatsoever To be itself reduced later

Millionsquaremile Yards surround the work in progress & fill daily with the purified material of the city Slowly Surely The artifacts & items of construction placed in their places about the Millionsquaremile Yards that ring the city Each according to its degree of reduction to elemental components Each artifact & item undone to its most common part Cleaned & polished All residue swept & collected This work done at benches temporaried at the site & manned in shifts by all who wish to & that dis-structuring which cannot be done upon the benches at the site Hauled to the Preparatoriums built for the purpose The Preparatoriums themselves when their work is done Someday As all the machines To be reduced to component elements & As such Await our final decision

At intervals of convenient walking space throughout the city & throughout the Millionsquaremile Yards As a handfull of sand would alight dropped from a certain height Dispersed to a certain distance by wind are Kitchen Theatres Sleeping recreation Old men doze under the cranes There is no rubble Children gather grass from the cracks of the inner city Boys gather cobwebs in abandoned basements Infants lie in park tents or beneath trees Women dismantle the delicate watches

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At the farthest outskirts of the Millionsquaremile Yards the Light Materials Files & cartons of ephemera Businesses emptied Desk drawers emptied Everyone's pockets emptied Scraps of paper baled Matchbooks undone Cartons unfolded Letters & notes filed alphabetically & crossreferenced as to sender and recipient To be remembered by those who remember Books unstapled & unglued Placed by author's name All to be remembered by those who remember all ephemera So placed preparatory to the removal of all inks and soilure All such boxed according to color All paper baled according to its color & quality preparatory to pulping & To our decision

Inward then to the Soft Materials Cloth Fibre Vegetable Compounds Wardrobes emptied The bales & yardage segregated by quality & type preparatory to the removal of dye Soilure Imperfections of all sorts All dye boxed according to color All plastics & like articles amongst the Semi-Soft Materials to have color removed or bleached by chemical means All such chemicals re-isolated & re-used until they are returned Or pending the decision later All fabrics amongst the Soft Materials & Semi-Soft to be reduced Re-weaved Re-wound in balls or skeins Of each the various yarns & strings All Soft Materials stored by quality & type pending our decision

From the periphery of the Yards Centrally moving Through the circles of Soft Materials to the Wood Moulding Sticks Unglued crates House lintels Axe handles Splinters Woods of all sorts stacked according to their kind Lumber goods All according to age & condition Doors dismantled of knobs hinges & locks Lath freed of screen & plaster Plywoods cleansed of glue Window casements de-glazed & de-hardwared All wooden goods according to height & width & breadth All paints stains & finishes removed & Boxed according to type color or common base All the wooden toys Chairs Telephone poles decocked of pikes All but the living trees to be stacked pending decision Or mulched for replacement within the system pits which shall have been the former city

The circular alignment of Materials around the city is such that the dense or Hand Materials are closest in Closest to the Rim of the disintegrating city It is our first city Yet the work goes upward like a way of life The roads out into the Yards are unimpeded The flow of men & take-aparts from the city is constant Only the Kitchen Theatres & Resting Theatres halt the wheeled rigs when the drivers are hungry or weary Pieces of the city's former construction fill the wagons outward & the wagons going inward are empty

Miles closer to the Rim around the city under dis-struction are the Hard & Semi-Hard Materials Glass Stone Concrete All glass & concrete is crushed The colors removed & the powders binned in storey-high bins Cement binding separated from the gravel & stored as such Dyes or chemical coloring separated & stored as such in silos & storey-high bins All natural stone stacked storey-high according to its type size & color All bricks Brick by brick The mortar blasted off & crushed & stored in bins All bricks gathered storey-high preparatory to crushing & re-mixture with the dim soil under the disintegrating city Mulched with the decayables amongst the Soft Materials & pulp for filling the excavationed city

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& Finally closest to the Rim of the city the metals Steels Substructures of buildings so carefully put up With care broken out Irons Aluminums Coppers Tungstens Metals of all grades & compositions Segregated according to their component metals & stacked Closest to the Rim of the city preparatory to re-foundrying down to their meanest component elements To be ingoted Re-stacked according to their type Each to its molecular structure Each to its place within the circle of the Yard closest to the Rim of the decomposing city Metal miles wide Miles high Awaiting our decision

We hope that this is only the first of all such cities to be so dis-structured That these millions engaged in this work will be joined by eager billions more It is hoped that our decision will not be fractional of us that Everyone will join in our final deciding The Material of all our former constructions are a great wealth Yet their cost to our one Home has caused a poverty of the house & So some of us are engaged upon this dis-struction Spirits are high Losses are low aside from natural deaths The children are healthy The men sleep well The women do not yearn We all live

Our neighbors come to watch us They take tours through the Yards gigantic as rings of Saturn They sit at our tables as far flung as pebbles from the sky They join the crowds on the Rim of the excavation as vast as canyons moated about the remnants of the central city They stare They ooh & aah They wave at the distant specks of people working & they are greeted back in turn by far arms Some of them go away Many join us Some go running down the slopes to work shedding their city names They go running down the sifted earth where already grass comes & goes once again with the seasons

The "Peacemaker"

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Theodore Enslin

from Note enclosed with two pieces

The geography in neither case is that of Temple, but certainly both have been important to me, and important in shaping the Temple landscape. It was during that childhood illness that I made up my mind that I would never live in a section such as that mish-mash where I grew up, and later, the shaman legends of the Organ Mountains in Southeastern New Mexico became important --- so that a return to them, and the actual holy ground --- Las Cuevas --- was a high point of the trip this fall.

Las Cuevas

Who guards?
and

who goes?
around

the terminal
dam
stem
meat

of the mountains.

Chaparral and live oak,

thin air the

fragile heights.

There are remnants
of

life and quick magic.

Protection to wear:

Rock is an amulet.

(Could be as fatal,

depends on the

spirit inside---
knife

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deep
    or bone deep

the spine of the cholla.)

Guards. Goes.
                reaches

the caves.

The Long February

The *short* or the long of it. It was a long block of time for me, though it may have been very different for someone else --- something different for each one of us. It was --- I think it was --- the February of 1932. It may not have been --- could have been '33 or '34 --- but certainly no later than '35 --- so that if it was a leap year, and one day longer than usual, it was in '32. It was about the same time that I read a grandfatherly ancestor of what is now called science fiction: A Thousand Years A Minute, by Carl H. Claudy. Two men leave for prehistoric times on a time machine which one of them has invented. As they get on board, one of them sees their Japanese manservant setting a pot of tea on the kitchen table. When they return, after several weeks of adventure, a million or so years ago, they have with them half of a stone axehead (which had been thrown at them as they left, sheered off by the flow of the time-stream) and the manservant is just pouring himself a cup of tea. Three different sorts of time for the three men and the axehead --- one of them conclusively exact for the smoothly cut stone. February in that year was an interminable month for me, partly because I was sick a good part of it and spent most of my time in bed, partly because of the disagreeable character of a winter in Southeastern Pennsylvania, where it lours, is almost invariably damp if not raining, or snows a slushy gelatin which is a poor excuse for the real thing --- one of the factors that made me decide, even in those very early years, that I would get out of the Middle Atlantic sog belt --- anywhere north, where there are real seasons, real winters, climaxing in the brutal, but alive, cold, which is February. I did that.

Items in my room: A calendar, probably from Burkholder's Drugstore, put out by the Dr. Miles' Nervine people --- an orange-bordered, tan affair, quite large, and headed with cautionary advice to take Nervine, along with pictures of people knotted in agony --- presumably those who had not. Quite fitting for February in Philadelphia, at that. I have since seen these calendars in farmhouses in rural Maine. They still look the same. Voice from another age, splitting me as I hear it ---

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as if I were the axehead. That calendar hung on my closet door. It stared down at me. It grinned. Not only the tortured sufferers, but the days themselves: 3, 7, 13, 24, --- would they never end? To be sure, there was a hiatus, a few days before the 14th, when my mother brought in a card table, and we sat at it, making frilly valentines from parts that never seemed to cohere quite as they were supposed to according to the instructions, which gave the half-dozen easy steps required to make a dozen heart-shaped doilies, looking rather like the lace at the top of a conventional slip of that period. I became rather bored with all these preparations, as I remember it, but it did break the worse boredom of those days in bed which began with slivers of toast soaked in melted butter, always cold by the time I got to them, cups of cambric tea, or an egg beaten up in orange juice, if the fever had been high the night before. I had what was known as grippe, an intermittent variety, which hung on --- unshakeable --- just like February. The doctor, a rather nice old caricature of what a family doctor was supposed to be, complete with a magnificent shock of pure white hair, drawn sharply to a widow's peak on his pale forehead, usually came about midmorning, thumped and tapped and listened for congestion --- then left, leaving behind him a prescription for some nauseous preparation, to be gotten later at Burkholder's. But nothing that Burkholder could serve up in his bottles or powders was as dispiriting as that damned calendar. It sat on its nail: 2, 5, 9, 17 --- a few of its numbers indented with information about the phases of the moon, and it stared at me, accused me of not doing whatever school work I might be supposed to be doing, frowning on the 4, 6, 10, 19, as I read Claudy, and fanciful tales of *real* winters in the Yukon: James Oliver Curwood, and Jack London.

I said, items in my room, and I've said nothing about anything except that calendar. It overshadowed all of the rest, that was it. There was a blackboard, which I sometimes enjoyed using, and where my father used to draw things for me, just before I went to sleep in the evening. There was a chest covered with oilcloth by the door, which was supposed to hold my toys, in some sort of order --- always hopelessly *out* of order, and with bits of broken wagons and trucks tucked in at the bottom. I was always afraid of a scolding for having broken them. There were two bookcases, on the north and west walls. They held an interesting selection, not all of them children's stories, by any means. There were the three with which I had taught myself to read: Thornton Burgess: Old Mother West Wind, and V. M. Hillyer's Child's History and Geography of the World, George MacDonald's At The Back of the North Wind, and that curious book, Heaven Folk, of Waldemar Bonsels, which I couldn't quite grasp. I'd go back to these occasionally. And there were several sheets of paper on which I had drawn facsmilies of every knife, sword, cleaver, or battleaxe which I'd been able to find in the big Webster's in my father's study. I remember being very proud of the curves I'd put in the blade of a kriss. There was the bur-

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eau directly below the foot of my bed, with a few things on top, usually bits of clothing that I had left there, and some hairbrushes. I would wake up in the half-light of early morning, and with my eyes half-closed look at the shapes of these things, imagining that they were marvelous treasures, jewels, pieces of armor, furs, or even tropical birds --- things that I might have been reading about, and they *were* those things until the light became stronger, and I could see that what I had imagined was the scabbard of a Nibelungen sword, or a steel gauntlet, was nothing but the buckle of my belt looped over a comb. There were all these, a kneehole desk, youth size, as well as a couple of chairs, one by my bed where no one except the doctor ever sat, and a floor lamp which I was always tipping over, and with whose shade I experimented, holding it against the light bulb until it started to scorch (I can conjure up that smell to this day). I suppose I did it out of boredom, when I was tired of reading, tired of staying in bed as I was supposed to most of the time. It was better than glaring back at the baleful presence of Dr. Miles' Nervine calendar.

I was recovering. For two or three evenings, I'd had only a very slight fever --- under 100 --- and this afternoon I had none at all. I could go downstairs at last, for meals and a change of air. I wanted to go outside, to walk under the almost prostrate branches of the magnolia, but that was still forbidden. For all that, Dr. Miles receded --- I saw him very briefly in the morning, and then again at night. It was February, still, but it seemed at last as if it *would* end. Back on the 11th I'd have said that it never would, and that I would die in that room (perhaps because Dr. Gallagher hadn't prescribed Nervine?) I'd die there an old man, and it would still be February in Delaware County. Now it was changing.

I had a relapse. Back upstairs, I was forced back in time --- could it really be the 27th of February? No, the calendar said, it was only the 12th --- even though the valentines had been sent out, and I had received some in return.

That night it snowed --- a really deep snow --- wet as usual, but it was of real depth. I could hear my parents talking about it in the kitchen below my room. Would they be able to get out tomorrow? Should my father start shovelling the sidewalk now, before it got any deeper? I got up several times in the night, and stealthily opened the window to see how much deeper it had gotten on the ledge beyond, and each time it seemed that another foot had been added, though there was hardly that much in the entire fall. It was clear by daylight, but there was evidence of real winter outside. The snow-reflected sun lit up the dingy checkerboard of the calendar as it hadn't once before all through those February weeks. I had no fever, though I was ordered to stay in bed for at least that day. Whenever I was certain there was no one near in that part of the house, I

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got up, and went to the window --- the snow was everywhere, and there were few tracks, except for the paths that my father had shovelled earlier. I heard my mother say that the doctor couldn't get through until afternoon. But there was no *need* of his coming. I *was* recovering. I was recovering from February, and everyone imagined it was grippe. Tomorrow or the next day would be the first of March, and for the moment Kazan, the wolf dog of the north, was off howling somewhere in the hospital field near the railroad tracks. My father was on the flat roof over my room, shovelling off the heavy snow in great white bales that fell suddenly into the hollyhock bed below. I had a strange feeling of nostalgia. I had become used to the drag of February, it was *my* month, if only by default, if only because Dr. Miles had given it to me. Soon it would be March, and I would be outside again. Couldn't I hold on to February --- just a little longer?

The time stream was moving again. I had survived.

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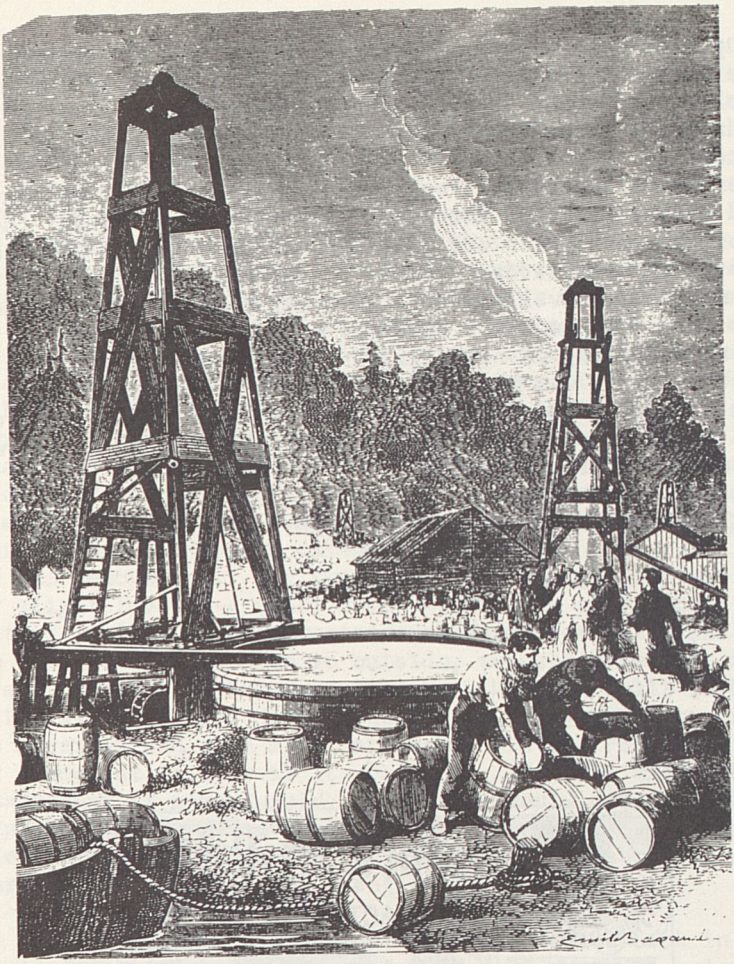

Indian Girl, Oregon.

Indian Chief, Oregon.

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DAPHNE MARLATT: RINGS, V.

Time to go in, from the afternoon grass, lifting him, nudging the pram under shadow of the house. From after noon sun keeps pouring, light we live in, thick with, smell of grass fresh-cut down the street, bird song, hour after hour the cats, wary in long grass hunting elusive wings. His face hardly tanned, eyes hurt in light, careful, turning with him in my arms to keep his face dark
turning, wheeling with him in my arms, hand up shadowing his eyes, the light, intensive sky blue, into blue, shell-light over the radii of trees reaching their upturned arms high overhead, my head, over his, the cats' eyes filled, all, luminous cavity of brain,
with light:
this newborn (reborn) sensing, child I am with him, with sight, all my senses clear, for the first time, since I can remember, childlike spinning, dizzy.

'What goes up, must come down.' Up the back steps, stagger, hold him up lightly for my arms absorb the shock to him (springs) as once my water did, & into, shoulder against the door, dark kitchen smell people have lived in, years (old lady, all the windows nailed against the light). Now, door ajar for cats, it lightens, wind blows thru our curtains, sun pours into the front room I see it, crossing the back, shine along a length of wooden hall. His room's still faint blue under the white, red curtains made so air moves specks of colour, yellow, breathe.

And laying him down (my arms unroll, unburden) on the white sheet, he begins to kick, anticipating diaper change, yes, wet -- unpinned now, folded on the can lid, heat will condense in little drops by the time I get back and, now his legs are waving free, he likes that, smiles, fists waving too, slow-motion under water dance us both, reeds, & the dark at the back of my eyes...
Imminent dizziness from heat. From light to dark. I concentrate. Red buttocks: cream (cold & white). Big balls & penis, & the fabric soft against them. Folding in to pin, he doesn't like that, cries. Have I poked him? No. Ever? Maybe natural, fear of binding, or my apprehensive fingers. Hi, blue eyes, funny face so blue
as the sea unknown. What you see, when will you smile TO me? (Believing already you know who, in the hospital gaze at my hair, my mouth, & know my voice.) But smile? They say it's gas fleeting, pucker. Whimsy. You know, little one. With the smallest frown unfocused between your brows. Hungry? Yes, it's time.
And light. Wind's blowing the curtains, see, patterns of light like waves falling across the floor. And cool now on my skin, unbuttoning blouse, evaporates, my sweat from the sun gone. You? cold? The cotton blanket, all your things, that delicate smell you're wrapt in, new. But you must smell the grass on me, sweat, insects, earth? These things you'll spend hours with. All right, I'm hurrying. And the milk's already dripping. That's your world. Hunger surge, mouth open already crying. Pain? There, into the rocking chair's familiar fabric against my back, elbow up to support your head, & nipple lifted towards, You're drinking now those hungry sucking movements of mouth, palate like little fish. And snuggling down myself into the chairback can relax now, So, The day

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is still,
Again,
This world. Something precious, something out of the course of time marked off by clocks. Wind blows, plants breathe out their odours drawn by sun, drifts, gradually over the house, shadows the back lane lengthen, birds too, active at different times remark, their wings worms' activity, the day's age... daze, an age was all I knew, child in blue sea-dress & bare legs, climbing from terrace to terrace. Uncalled (from home), called, by the focus of an orchid, length of tree shadow, sun a glint on sea below, the island light, passing from mainland out to sea where wind turns time, known by intensity of odours, orchids', & the earth.
Here,

lilacs outside your window. Lilac time I brought you home in. Thick fragrance up the back lane our car drove through, Al drove thru, ecstasy, to be outdoors again, get out on grass, springy, unlike cement or hospital floors my feet had known a week, & you had never known it, smelt, the sun. In every blade, leaf, helm. Breathing light. And never known the lilacs, thought, old lady flowers a dying, virulent as fever (ecstasy)

Cold at my heart ('must co-o-me down'), times you're so quiet (sleeping) when I bend can't tell if you're breathing still. And Al, of course he is. The cats, Conch in your crib the other day. By suffocation. Sudden death. Wake up suddenly past the hour you should have woken cried for milk, Come running down the hall, fear at my throat, The time, the time it takes to reach your door, open it, draw near (slow-motion, slow, reluctant) Find you sleeping still.
The fear.
Stops. Up my heart, stops breath. Stop. The circle ('spinning thru'. 'Drop, all your troubles by the river, side, Catch a painted pony on the spinning wheel ride.' Which does spin on thru. It's fear of the unexpected, of, the music, suddenly broken off. It's fear of it happening, When...? ('Is the music over, Mom?')

'Let the spinning wheel spin.'

And the pressure, built up almost till it hurts in the other breast, towel tucked under wet, & you, long hard pulls now, almost empty, time to change. Lift you up, little head on my shoulder, stroke that burp that never comes between times, only after, only they say, burp him between breasts, & I grow tired of hurting, & you, maybe want some more, or maybe fall asleep, already? I put you down in my arm, left side I never can arrange it right, so your nose is free to breathe & your head not turned in some way awkward the other never is. Left side, sinistra. But you're eager. No need to suck, it's there, drip from the nipple, Tho you do, must, I figure, your gulping that swift, spurt, like a water fountain down your throat.
Connects.
Open conduit, light or liquid flowing thru. You. In the circle my arms make around you drinking sun my own skin, hair, absorbed what you now take in. All that you need.
Yet seemed so thin-looking when it first came in a milky water. All the nutrients are

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there. And still it runs. More as you want more, grow more. Amazed, at the interconnection still. Those first days how, with every suck, I could feel the walls of the uterus contract. You, isolate now, & born, healing my body for me.

Now wonder he grows strange, feeling so, outside. Never comes in when he comes home, only sometimes, news to tell. But usually (no news? bad news?) heads into the kitchen or the bathroom. Ritual of coming home. Jacket on chair (hot?) sleeves rolled up, neck open (tired & edgy) heads for ice, scotch. The end of a cement day of hospital floors. Walls. Still there.

Walls & clocks he has to move by. Watch (face of the sun) he never takes off, wound by the action of his wrist each day a myriad gestures, tasks, the way he writes, backhanded. Backwards (stubborn), moving back.

Last night's dream sat up in the middle of the bed to hold him, catch him falling thru a confusion of falling Kit was him. And only woke him.

Fear.

Stopt the wheel, the music falling out of time. & 'the painted pony', Rides on up & down, Riderless. Retreating.

The unborn.

Who-is-it? lives, a dark unknown. No two feet on the ground, no gravity in water, no sense of weight. His own, his own weight known to him.

My fear's, then, not that he die who (I've barely known), but not to be born, Not bear himself alone & learning it, his birth into the light of day, the risk we all take, pushed out into it. No one a mother to him, No --- the uterus itself contracts & pushes its burden out. At a certain point (in time) ripe as a fruit, a weight, the intimate night's expelled. Made light. Made isolate one in the world

the wheel. My arms make around you spinning as the world does, we wheel thru light & dark. One day's going (birds, & wind, leaves tightening as our warmth does) into night.

What can I tell you, little one, that you don't already know? Nestled there half-asleep, yet sucking, dreamy, open to milk, to all you want & all that afflicts you, hunger, gas, light, irriation. Self-contained there in my arms that weigh the burden of you. Your small face. Knowing, Unknowing, I will bend over, shade you plantlike as the sun turns, Gradually, deepening toward suppertime & the night, light outside your window already cut off by the house, by five o'clock.

Cars whirr by outside, gravel spews. (A certain motor. Gears down, stops. News from outside coming home.

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Anne Oswald

Near Tassajara Bon Owl - to be sung

"When at first I liked the whites
I gave them fruits
I gave them fruits"
"The whites are crazy Ahe yuhe yu" - *Ghost Dance Religion*

eating shooting stars in this garden primeval
where irridescent lizards look deep into the glass water

the mystery lives stone silent in teepee circle and high grasses
by fire at night we recreate the old ways - from what sacred
memory?
by sacred dance and chant slowly we breathe it alive
speaking thoughts of water-witching and healing
and healing: sacred this vision: how to move with the auras,
the force-fields of rock and tree and running water
it is Zuni Hopi Celtic Egyptian faery tale
these are Chinese mountains we are Russian gypsies
naked in the wind, I'm Artemis the Huntress
Orion's belt is Ra's penis
we are silkies
the quicksilver dancers

events merge:
Sister Merry Val possessed by bear or puma under the fierce
stars
as one night we awaken for the comet
and its dragon-thrill of pure light

Brother Gerry coming down the road
in her long lyric shabby skirt
steps into mythic flute

who is Pomader?
an incarnation of what gesture?

the preta is an unreal appetite or illusion which cannot be
satisfied.
consider a meditation fantasy of sugar, pirating the spirit
toward Babylon, Scintillating City of Chocolate and Electric
Crucifixion.
that long strung-out insectual energy from six thousand weirds
recorded hysteria.
Lucifers's tintype beats, I call at night "bright-eyed blind
iron pigs"
sugar-shooting tremor is not prana, but spastic -
paralysis

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as I have said, some of the children are mad
having pinwheel rainbow eyes
some sort of laser effect sets in
destroying the eyes
and other organs of consciousness
eyes like these neither give off nor receive energy
I know this condition well
it has affected me all of my life
it is very dangerous
you cannot know of the existence of the scorpion
until after he bites

you ask if a child is born out of shit
the answer is
that the child is surrounded by hot blood
and heartbeat
that is why
we now play drums around this fire

Julian is a beautiful name
so is Rachel the child, wearing a necklace of yarn
Ira-Ora-Aura Leah means wild cow
with feather masks more delicate than air
Julian and Rachel the child eat together
the graceful fruits of Earth
o dark Mother primordial
devour us not

vernal:
all the little children love peppermint tea
and angelica
allah dada
allah dada

I thank which is invisible and which I don't understand.
I thank this language.
Perceived word-for-word this is but ceremonial food for the dead.
So do not be deluded, but know this form-by-spirit
and the energy in these hollow bones will not elude you.

Siberian Myth for the Living

on the eighth day
the children made hand-prints of black and purple
and called this Night
yet the stars tore deep holes of light in the velvet

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weightless butterflies were invented called Ariels
who could fly through the star-holes
and their cries of love
were Thunder

and we played with mercury on a black table
how out of One
hot mirror core
grew many families, galaxies

Primal:
throughout the dark-shaped saturnalia,
the ancient fire
and a small Asian man
offered to us
thin Japanese cookies
heart of lemon

Cliff-jumping, Cock-sucking:
to become the song of the great horse
as each of his souls ascends space
to ascend this Purple Dream

Alexei:
green Jupiter mushroom child
green flowering child
and the sea is milk

This Is The Blue Planet Limbed, Flexed, Dancing (Thanks Giving)
Star Map
dream from the mythic cards:

ancient Greek statues with faces from "Blood of a Poet" come
to life.
hundreds of feet high, weighing thousands of stone, they move
gracefully,
smile: "moratorium". I understand they are brothers through
centuries.
ALPHA CENTURION - STAR CONTINUUM majora, minora - stars and
labia

new occult form:
a Hell's Angel on LSD
leaves his body
to enter a UFO

Val is sometimes solid like roots and pollen together
and all high sap aflowing
we move together and apart

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dance of ice-age wounds melting into heat
in centrifugal time

we are helping each other to die
he who is without a name
flies around in winged horseskin
shells around his neck and over his penis
his black dog is Thanes
a guide through Pluto or Fear
they tell of exchanging heads
to dream Another Dream
and white energy
shoots from their fingers
elongated in communion

we don't remember the Aleph
this is weakness
at the same time
you know the Mystery like the palm of your hand
don't you?

this is the last autistic century
and it goes beyond that:
it doesn't matter what century this is
swirling
our faces change to the breathing of light
containing all dark karmic gore
and our highest beginning
of clear orgasm
in clairvoyant space

Conrad has a saffron and watches Devi's ass
I have been his child too
we all have candles in our animal eyes
Devi is the goddess on the Elephant Val
can we be the holy family
touching hair, watching Orion

beard of saffron sucks lightly at my throat
I'm full of his hot seed
and incredibly warm
our hands have become incandescent organs.
this is the nature of spirit

the beautiful revolution is Jill
the children playing with her breasts
the revolution is when we see our friends
enacting a love base
that is why Buffy Saint Marie
with her animal cry
stands inside "Starry Night"

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last night we walked the starry hills
with fog-blown moon
a lot of grass on us
in Conrad's pocket, not my boot
uneasy about pigs
it was alien territory
but we had the sky and blossoms in our tea
all heavy resin

TO BE FILLED WITH AN UNCONTROLLABLE LOVE
the secret universe spilling loose
and the animals come
as though it were sun
I have no other way to tell you
just breath turning into voice

"I write it because it's pure electric
leading back to the Magician"
(Christopher Crotch, Metaphysician
Lives in a mountain cave with wild goats
makes love with them sometimes too)

from "Dance With Tambourine and Bells"

beginning with a high-pitched Arab wail
and my body of a thousand lights

ancient movement in the streets: Zulu, Maori, Mongol, Lapp.
Gypsies. Eros.
Mercy and the Killer Dog. Strange woods people dressed in
skins. Nomads
from Mohave weddings, with walking sticks and flowers burnt
pale by the desert.
You can recognize the Indian by his dark and lustrous eyes.
Tongue of another India is Hari, who knows this acid dream
exists.
with eyes of silver boils the god

whorls of jagged fire
worlds of cells the spermal tide
the living changing thread
"getting it together" must mean the animal-god in its true
undulation

Sun moves to other side of Sky
you tell me of a secret encounter with a man
I ask "was he poor or bourgeois?"
I say "you can't destroy Rome in a day, that's what bothers me"
you answer "you can destroy the Rome in your head in a day"

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you are in your Sky World of China Blue
a moon is shining above your huge head
thin sliver of ice flash
I have held your head
though we are mad
The Mountain: thin
air and flutes
and Silence
we called the birds
they sat in slow-footed trees
whose heads were stars

In the thousand-petalled forest: pure serpent green fungus
of this life

To Aurora: fire-ice-age-earthquake-shaman
can you believe in your own fine-burning?
this is an active volcano
here is where we found you laughing and crying
you and he piss together - a healthy sound into the rich mosses
dragon-flies big as birds in the shadows
I found a strange mushroom with eight-pointed star by the
waterfall
in the woods at night - tramping on through like Roughshod
Animals
each found his own level of yang

a tribal fire burned
all night I was afraid of being incinerated
toward morning I heard him soothe you and build up the fire
the sun begins on his body
rising higher and higher
like a feathered moth
it is good to see him this clear
all things here tell of earth

only a word spell for Awa
who jumped from the Golden Gate Bridge
on All Hallow's Eve and he is alive
hair of fire
element water
changing form

Notes on Transcending this Crude Karma

Jan. 1 spirit year. a feather blows into my room
the battle is between sleep and light

Jan. 2 I put my paw on his shoe. we are that animal
that thinks and has shoes.

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Jan. 3 bright animal touch of human light

Jan. 11 I have one back against the wall, the other
against them and am caught in a strange
sound which is not the human music

Jan. 12 heavy walls.
petty fascists have no power unless you give it to
them.

Jan. 15 strangers in the halls. I don't wonder who they are.
like a pig, I don't speak. one of them is pregnant.
about to give birth.

Feb. 7 this orange and yellow house
full of us vampires
Valencia is in hot orange grown fragile

Feb. 28 vegetable kingdom
someone in this myth
meditates upon the signatures of demons, he says
we ring like bells

Feb. 29 law which may not even exist: a night of sun
discover more secrets of the helix
may the god worlds in us all earthquake.

Mar. 15 no earthquake today.
no nuclear terror.

Mar. 18 the city is torturing us with sugar
we feel its anger in our rigid necks after shooting up.

Mar. 21 how did I get lice?
is it my new mattress from the Purple Heart?

Mar. 22 I hide in my room
wishing to live alone.
please generate me.

Apr. 11 in this, the last city of several moons
I call to you deep in my old brain
and we move across the darkness toward light.

Apr. 12 prehistoric prayer-drawing of bird
is essence of to fly

Apr. 13 incredible archetypes
in the streets of the last city of life
portulaca in the air or is portulaca odorless?

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Apr. 35 we persist as dragons
for millions of crystals now.

Apr. 36 I know you need my heat
but we were making each other crazy today
in some way devoured by our own divinity.

Apr. 37 just waiting,
moving to a different spot to wait

Apr. 38 what is it about glass?
is it the fear that breaks or the eye?

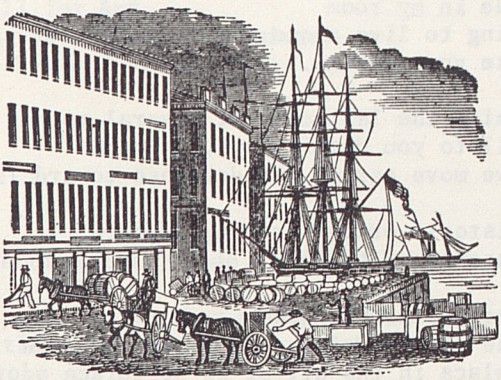
Apr. 39 today I saved my life with sassafras (the bark lay
in the cup
like a forest) and a candle and an apple.
I will need these friends again.

May 7 my own hands and feet: deer bone.
now the night is hung with far Indian cloth
the moon is in man

May 10 we who are on fire
take in more fire
we who breathe fire are in perfect harmony with the sea.

May 13 a window of moving sky
mad cerulean peacock

dark power sets in motion the forces of the machine.
when I come to the light, I set in motion my own energy
we are mirrors that throw the light
the luminescence



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Dear Miss Fitzgerald,

The San Francisco Group was started back in 1947. Buck Shaw was their coach and Tony Morabito was their owner. That, of course, was in the All America Conference.

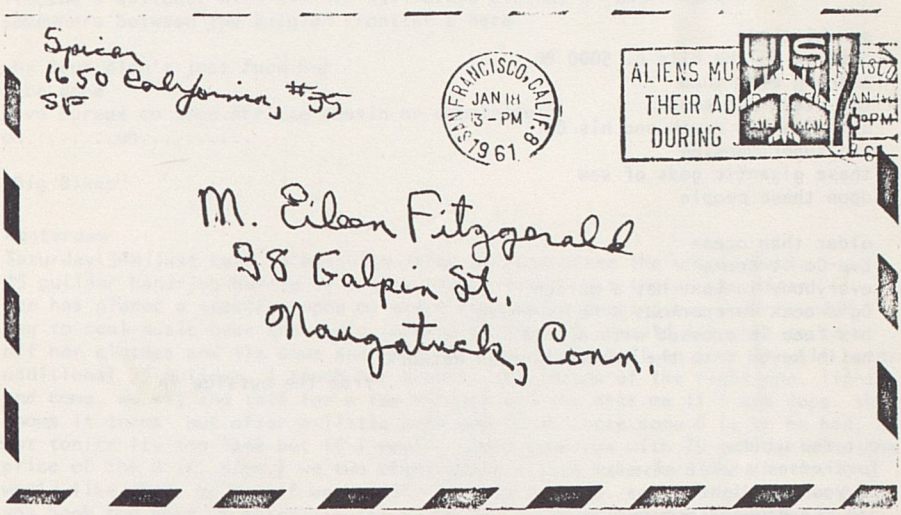
Lately we have not been winning games although this year, due to our Shotgun Formation (really a variation of the Short Punt) we tied the Detroit Lions for second place in the Western League.

I joined the Group in 1952 and except for having been traded to the Yankees and the Patriots in the 1955 and 1956 season have played with them ever since.

I cannot imagine writing a thesis about us because there are too many of us.

Yours sincerely,

Jack Spicer



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5 september / 10:15 AM

you said this was the week they took the photographs
for next years picture postcards of Toulouse

but its raining over Reykjavik

*

learn fast : times & monies & schedules of trains
& how many languages do you speak

Blow-UP / no soul but stones
& the sweetest piece of ass in the whole fucking Duchy
dances on the glass floor a few inches above us. we are drinking Pernod
a taste is offered, accepted.

Neon Soma in the sky above Lux. En. Bourgh

FLY AIR AGARIC

breakfast
(like who eats it)

*

& now of a sudden certain uh considerations begin for the first time
in the aftermath of 3 NY girls from Israel money gone dead tired and
stuck in the Luxembourg Gare

this is very far. Havoc
older than ocean

so white men
pushing up the Nile c. 5000 BC
pushing even then
the black man south
bringing his Hawah and his Og
and superimposing
these gigantic gods of sex
upon these people

older than ocean
Eve-Oc it seems
everybody in Lux. has a garden
Og's cock is enormous & he is white
his face is crossed with a grid
he is keyed into the transatlantean network
from the outside in

out the window
fortresses & what else
Ed you was right
can the Brusselsprouts
& make it to London

that set

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that's set
is everywhere

ockhumenos
hagiography, cock-sucking
Ogygra Kirke's island in the Atlantic
vanisht
as soon as she toucht it
discovered it
was gone
gated

O my hermetic wanderer
my love
puts her hand down
unlooking to the leftwards
invokes Faust in a small brown leather edition
& asks as acts as poetry's priestess
for a word or two
Mephistopheles says: yes I am here
but I have one thing, a demand
only to give you
she must sing 300 masses
and besides that
my pockets are empty

echos the Mephistopheles at the end of Busoni's Faust
who looking down at the dead body of the Magician asks

Sollte diesser Mann etwa verungluckt sein?
(could it be this man has come to some harm)

*

Tragedy
or how they brought the bad news from Koln to Gent
Timotha's suitcase with all her Kalifornia clothes & jewels gone
somewhere between the Belgian frontier & here

why Zeus didn't just fuck her
& be done
give Europe to some African cousin or something
uh.....uh.....

"Big Bleep"

*

Amsterdam
Saturday 3AM just back to mosquito infested room after the unbelievable 25 guilder hand-job hustle by a very bright brown west indian who after she has placed a spectrum upon my erect cock while tapping her well-rounded leg to soul-music over the radio informs me that if I would like her to take off her clothes and lie down and make love to me for half an hour it will be an additional 75 guilder. I touch her breast, the inside of the right one, lightly and come, we sit and talk for a few minutes and she asks me if I use dope. she knows it turns out after a little back and forth where some O is to be had, only not tonite its too late but if I would return tomorrow with 75 guilder plus the price of the O (f. 5/gm.) we two might smoke & then make love and she for one would like that. me too if we weren't leaving so soon. sorry lovely brown baby you hook too good. & after all the elaborate preparations for losing my houri-cherry I still haven't but it sure in those moments brought me back NY & Fred days and my how nice I am. Paulette's super-pimp not tonite. tomorrow bookstores and the museum. I'll dream about Miss Thang of the C-dyke.

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*

abt to drink a capuccino and cognac. I think I'm eating these days as never before
forced in some way to this, as language intervenes,
and the tragedy intervenes
and the tragedy
hangs as ever
"I'm forever blowing bubbles" sings the cafeman
and she's forever blowing me

one week tonite
& the meaning of misfortune
Miss FOrtune is her name
(Timotha buys the Rolling Stone w/ Michael's obit of Jim)

*

Durer's John before God and the Elders
the space is such that it is perfectly clear heaven is coterminus w/ earth
co-existant
here heaven now above our heads &/or in front or behind us
God watches
a star burns in his hand
a sword from his mouth -rightwards!

the opening of the fifth and sixth seals
spark from the mountain
old women hold their heads

come back tomorrow, yes, we
smoke &
lie together
for 1/2 hour
down the inside of her right breast
her cheek brushed just as softly
passing out
into the night

God is blind
a beast with two horns like a lamb

the Babylonian Hoer
Kings lined up for days
to lie with her
while the angel with the key to the bottomless pit
lets his demon out
his help his health

Eve tempts the snake
abt to bite wrapt around a tree
wrapt around Adam

"and don't think when I praise the sun
I wouldn't rather be praising the blond boy who ate all my potatoe chips
Its just that when I wake up, he won't be there"

*

it is difficult to ride on a train now without the memory of T.'s suitcase
loomings a shadow over the joy of sitting in one of these beautiful second
class compartments. thinking about the autohag. and A.C.'s means of dealing
with M.F. (XX)

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*

City of Louvain's University
500 years old the room we sleep in
Medevil cities, a Katholik Kollege whose rector of theological studies
says at the champagne dinner
interferon is a religious substance

"Then will I lift her to pinnacles of power
then will I breed from her a child mightier than all the Kings of the earth
I will fill her with joy: with my force shall she see & strike at the
worship of Nuit: she shall achieve Hadit"

she shall kill the sky
she shall reign & rain upon the earth
the seed I have put in her
pierced thru
from vulva to the crown of head

in Dee's mirror
a mummified jackal

equinoctial sun falling into the arms of Nuit

how silent and quiet these days have been
preoccupied with harlots & thieves
their tricks & their broken oaths
& now holding these pages in the Master Therion's hand I read

"Compassion the noblest virtue of the Buddhist is damned outright by Aiwass"
Xairi a failure

she holds a mirror
listens for the key in the lock
but does not look
is bloodied & bound round the breasts
a girl at her feet feeds the soils of the snake into her
Lilith plunges from the inner sanctuary
the door opens
Xairi and Pagos

the floors creak
no matter what something always begins to look like
time
"is the unique subjective"

*

if the earth is a single embryonic cell
bathed in milky fluid
we are the viruses

*

listening to the first cobalt poem of 1971 you asked Timotha
what prompted her to ask
such a poem of me

"It's not finished"
at all

the rare
the very rare
event

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THE PORTABLE RAILROAD IN OPERATION.

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LINDY HOUGH: as mad as you are

More stigma,
but that recedes
as the steps from
the world are forgotten,
then only the lunacy
of individuals
without any pretence
of orderliness or
correct functioning

As soon as I read things
in magazines & agree that
they are good ideas, I
can see their limitation ---

put away the toys he isn't
playing with for some months,
then bring them out "as new"

is
an adult constantly taking
away and putting away
shifting the familiar scene
he runs over each night,
things disappearing -- to
be hid? Why? he asks

whereas in his toy box, all there,
on a dull day he can open it
up and refind everything
he had been bored with before

the lunacy of mothers who
have everything planned out ---
not vegetation management or
watershed managment
but children management

& thus we have the lesson
as my good Father & Lover
used to say,
how we interfere
in a functioning world
to our doom

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GEORGE QUASHA

SOMAPOETICS #4

Diana, goddess of Mars, rides on the backs of dolphins
dreaming of light, mountains and woods
for no other reason than that it pleases her to do so
The realities which the Ancients animated with gods of those names
are polar opposites of the erotic dreams of dolphins
transmitted to Diana thru her vaginal lips
lacing air and water in the tapestry called myth
When she menstruates there are storms in her favorite places
providing blood for the animals within those ecosystems
Her Temple at Lake Nemi is thought to have entertained strange
rites
in which initiates partook of a secret plant or fungus
and the beautiful virgins fucked only runaway slaves
who had murdered their masters in man-to-man combat
Similarly Mount Mandara, as pictured in an 18th century Indian
miniature (Musée Guimet),
resembles a mushroom or human cock from which "The Churning of
the Sea"
produces Amrita, Divine Inebrient, a juice or perhaps in some
cases urine
of a man who has eaten the Moon
or a dolphin who has pierced its image on the sea
or a slave who has given uncommon pleasure to Diana herself
Delphine pleasure

SOMAPOETICS #5

"The Chinese like very much to state their ideas in couplets"
[D.T. Suzuki]
All streams flow, the mountains are not moving.
White clouds move on, but the blue mountains move not.
White words. Blue language.
White clouds join what is on the other side of a blue door
which does not exist. Absolute presence
of mind
in a tough situation. The blueness
of the door.

SOMAPOETICS #6

Yesod is what comes out of the Dolphin's blowhole.
The Moon is before us, my love.
No, it is my body, fully erect, the fine light
of the Moon shining thru, blinding us
with love
for the secret selves we have been waiting for.

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Take four steps forward
from the center of the head.
Meet the dance half-way
where the feet are motionless and subtle,
and directly below

the intention:

Now

go
anywhere, plant in hand,
the body, waking from the middle,
is coming to life, or coming out
of the blowhole

SOMAPOETICS #7

He will do anything to avoid
confronting the absence
of his mind. I give you, in a word, the origin
of speech. Listen! He is passing
at this very instant, passing us
by

SOMAPOETICS #8

Stretcheth as far as doth the mind of man. [Marlowe's *Faust*]
I am a magician
in reverse. Shrinketh as doth the
need. The bubble. The shell. The backwards slide
of the womb after birth
or fucking, the brain, this one
is the cock, returneth to its waiting
for size: take me into you
suck out of me this self
fearing its own loss
being loss itself, shelled.
Out comes this.
And back again.
In reverse, things
have lost their magic, do not converse
with me, I know they should,
I who am the things,
their outside
skin, and cannot pass beyond it.
Where am I now, where am I now
is the origin of speech.

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SOMAPOETICS #10

The problem is in the observation of particulars.
There are an endless number of particulars, and a small fraction observed.
The body we have been making love to is a midget.
The armpits are tiny.
Someone must be holding the telescope backwards.
The moon is too far away to see.
There must be an endless number of particularities about the moon as no doubt there are about our lover's body.
Why have we not noticed the richness of the lover's body?
Why have we rejected richness and fullbodied intercourse?
Why have we not conversed in fullbodied, deepminded intercourse?
Why are we not hooked up body to body and mind to mind?
Why have we not developed a better method of observation?
Why have we not observed ourselves not observing particulars?
Why have we made it necessary to ask these idiotic questions?
Why have we not been singing songs?
Why have we not invented a new language?
Why have we forgotten all the secrets?
Why have we forgotten our dreams?
Why have our dreams forgotten us?
Why have I forgotten who you are?
Why have you forgotten who I am?
Why do you think I'm a midget?
Why haven't I any particulars?
Why haven't you?
Why can't I see you?
Why is there no light?
Why is it this way?

SOMAPOETICS #11

Why is this not magic?
Why am I afraid of magic?
Magic? *"do you not believe*
behind all your beliefs,
that there is but one reality
and we are its shadows;
and that all things are but aspects of one thing;
a center where men melt into Man and Man into God?

'No,' said Father Brown.

[G. K. Chesterton, *The Dagger with Wings*]

Help me draw this Pentagram.
This is my first.
I've been told it works.
Think of five:
I see the five wounds on the body of Christ.

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I see his red blood, muscarine red.
I am drinking his blood from a silver chalice
along with the others in Tintoretto's *The Last Supper* [1592-94].
Here, drink this, He says, holding it to my lips.
It has a vaguely fungal taste, and a tawniness of color.
It fills my body, it warms, I am liquid, there is light in me,
with each sip. I drink a little, then rest. The light comes
in flashes, and I am but its projection, on and off, and meanwhile
I notice that the clouds of smoke from the burning oil lamps
are turning and turning and turning miraculously
into waves and waves of angels, celestial attendants, winged creatures
with warm sexual bodies, male and female, the delicious male
and the delicious female, divine-androgyne, in my mind, makes me
sense this Man as a Woman, magical Mother, He offers me His Body
and His Blood, and I take them into mind, into the womb of mind,
meanwhile the beautiful dancing apsaras around my head,
drinking the blood of air, thinking of the five wounds
to come, the five veils against evil
and the five walls of self, against magick.

SOMAPOETICS #19

Rodin's Thinker is a fakir.
Theodore Illion's account of the "Tibetan Shaft," leading to
seven buildings of the "City of the Initiates," is compared to
Richard S. Shaver's "Mystery" -- evil "cavern people" called
"Deros" (*Amazing Stories*, June 1947, Vol. 21, No. 6). We are
relieved to learn, however, "ALL CAVERN PEOPLE ARE NOT DEROS,
thank God" (p. 136).
I couldn't get up early as planned this morning because a certain recurring
dream sucked me into its vortex: dark powers, or rather the mind displaced
and allowed to function at distant nodes; the eyesocket sinks
into my head at four removes from my body, becomes a shaft.
Throw in a stone, wait three lifetimes for the splash.
Next I will be following one of K.'s scarlet women into a cavern
upstate, across time-barriers keeping us
from the true America.
I too am interested in Indians
and their reasons for living underground
in such awesome numbers.
Darkness Over Tibet. Oak Island in Mahone Bay, Nova Scotia,
alone among 333 or so others has oak trees, red clover, certain fungi, etc.
In early days the settlers believed it was haunted, told tales
of strange lights, mysterious sounds, poems on the winds.
The main mystery is the "money pit" or shaft discovered in 1795.

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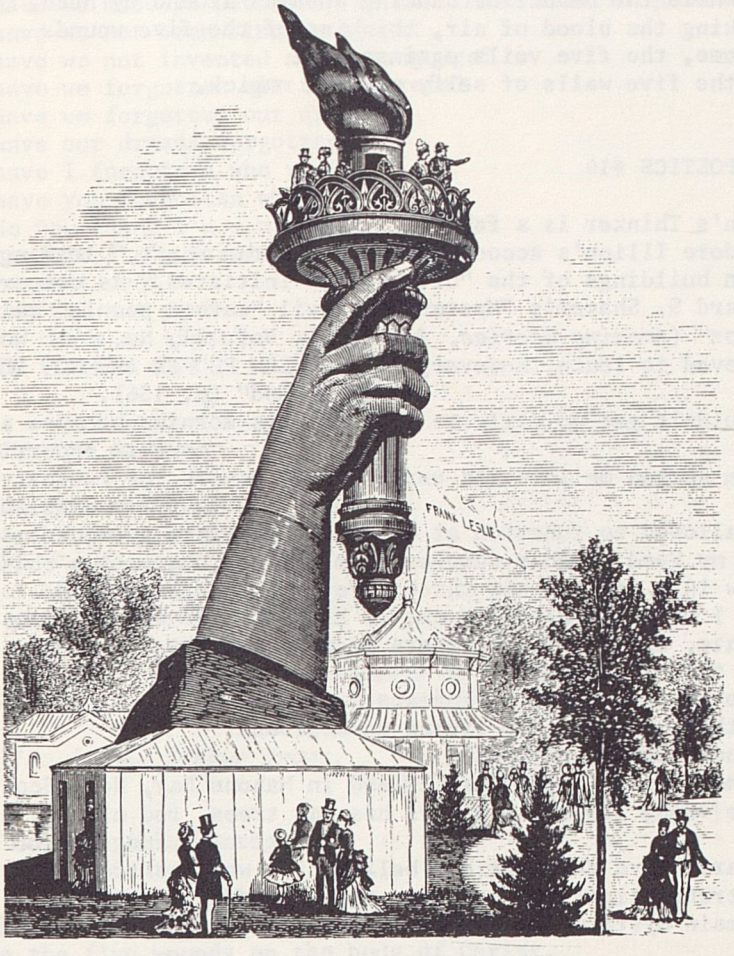
The root of evil: give me a verb adequate to the torsion
of the urge. *Yfel* [OE] from *UPO* [IE], "exceeding the proper
limit": we go too far, do wrong, or too much right, along the
road
of excess, *yfesdrype*, water from the eaves, drip, drip, down
into depths of earth I am an eavesdropper of ecstatic cries on
the winds
circling palaces of wisdom, *gno*, know too much, in the know,
secret,
the verb
is

[Thus the Thinker may be said to
stray from the point.]



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"That's really having your head
& eating it too -- oh I can't believe
what I said!"

+

or call it "image" & what is that but what works out
its own destiny
unknown to those present

+

the final fire burning up masks, theaters, coat-racks

+

"joint-knowing" by which we mean simply beyond
what either can argue in all fairness, said Soma, &:
This is our science. Sucking
thru the same tube.

+

"Did you hear they started the bombing again," Bill asked.
At that moment I was reading: *the murder of the Living*
by the human armored animal

+

"Many people have said my thought patterns before me"

+

Olson dying, his denture lost by lab technicians, shaping
his last words: "My work is finished, Robert, now
I have to contend with this *live-her.*" The pun
as a mode of transportation

+

And what am I to make of these fragments?
And what will they make of me? Maybe I
am still in the middle of her lullaby. Or waiting
for it to begin. Or waiting for the ground
to break
from the inside out. Grandfather, stop hiding
in earth. This flower is yours & you
are responsible.

And so on like this page after page
of unwritten letters.

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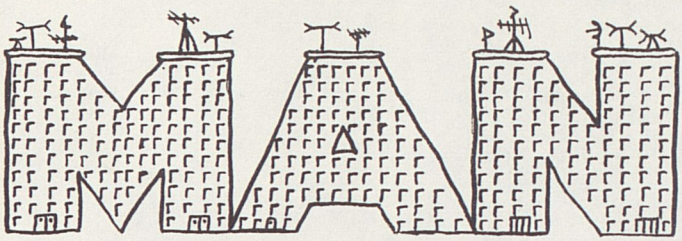
NOW! coming to the pages of CROOKED KOMICKS...



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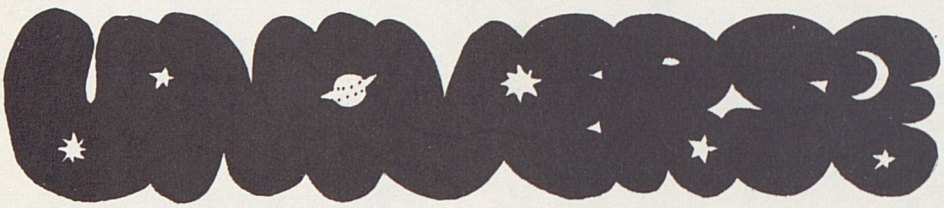

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Nels Richardson

The Monster

The monster of infinite potential
stumbles helpless under the
weight of his testicles.

On Judgement Day, before any man's
life can be summed up conclusively,
he will have to be castrated.

Otherwise some devil might get
a chance to say: "How could such
a heartless, sneaky bastard have
such kind and beautiful children?
There must be some good in him!"

4/11/71

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On Seeing an Ambulance in Spring

In a bus climbing Park Avenue South
I flash news about my new futures:
a patrolling ambulance
rescuing the victims of spring rushes:
There are not too many on this moonless day.
Sitting under the window I squint
I hit myself over the head for wanting a
house near a hill in Vermont and three gardeners.
The stars clear. I know I have to go
home to Third Avenue, to a derelict's shit under the
stairwell, stunk in the August furnace rooms.
On my way I am hit by a car
snowballing toward ancient Quebec,
the trip I made these three, since arduous,
summers back, a trip only a
reminder of what could be gone only
back to; for how can I promise myself a
home there, and three rabbit stews?
I am rescuing the victims of deadends in spring
insanity, snowballing like Cocteau's schoolmates in the
courtyard, up to 67th St. to Acconci's show,
himself covered with strange marks,
are they kisses, bruises?--
why bother planning an irrestible new planet
when you will only resent the fact that it falls
short/ falls so far beyond? what hoping and planning
graceless but winked and determined standing
can scribble in? a waking dream no less!
Exactly! The potential disappointment
mercilessly eye-opened-- raises the grim cudgel:
I grab it and draw it down on my skull ouch
a pat-- take it easy Nelson (on this ample April
Avenue no one takes (lightly)
hopes and plans I had sudden flash to revive!)

4/18/71

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Why Am I Awake?

Why am I awake?
Assuming that something
is keeping me awake,
let us call that something
the Moon.

If it weren't for the Moon
I could sleep!

4/30/71

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(untitled - summer 1971 - Syracuse)

Those who do not love us try to dispell
the terror as if it were an illusion
Those who love us

are so terrified they do not know
what to do, and try to dispell the terror
as if it were an illusion.

They do this by locking doors,
They set up a 'front' and a 'back'
the back being continuously invisible to the

front. By holding us tightly they only warm us,
protecting us from something
terrible behind us.

Is it so terrible to be unheld?

Then who holds me? I hate him or her.

He or she is terrified. Or is he or she cruel?

He or she is cruel!

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The Accident

When I cut myself, that half
of me was careless,

Now this half has learned to
be more cautious.

Why do I blame myself for
cutting myself? I am asking,

Now I am answering.

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A block I cannot stop at, thus
not a block I decide

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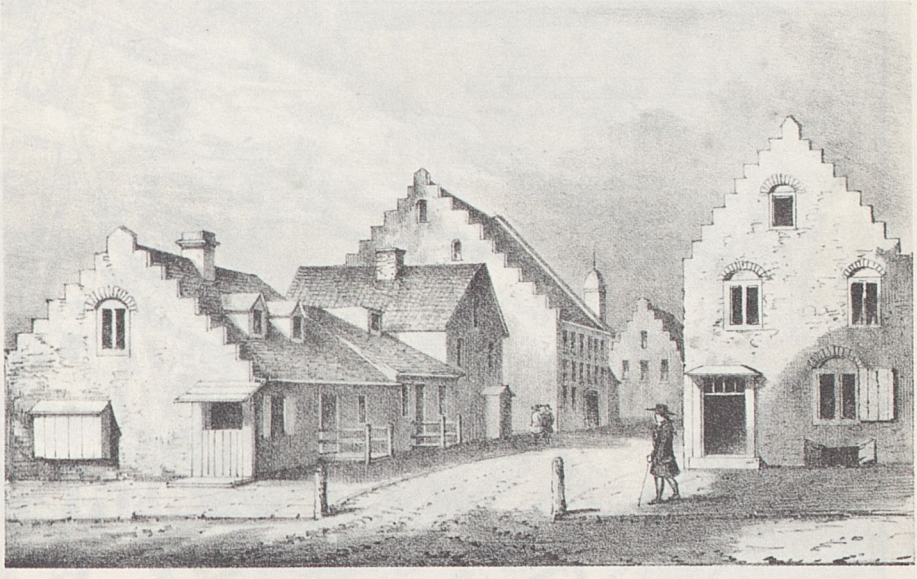
MANHATTAN: A MEDITATION

To envision, somehow, the cosmic scope of our use.
To see that, beneath that use, the land remains.
To apperceive, at last, that our creations are of an alien order.
Or that we are of an alien order.
Chardin called it Noosphere, *a shaping of the inner awareness, beyond the reach of intelligence, which has its own intelligence.*
The speed of our vision is now exponential. What has happened in a mere century, to Indian land.
If it, or they, has a center, the deepest penetration is Manhattan, the weight of those buildings on the mantle of soil. Again and again they hit the target. But the realization is yet to come.
Or, where we got to: 1971.



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NORTH EAST & SOUTH EAST CORNERS OF THE PRESENT BROAD STREET & EXCHANGE PLACE, N.Y.
taken about the close of the 17th Century.

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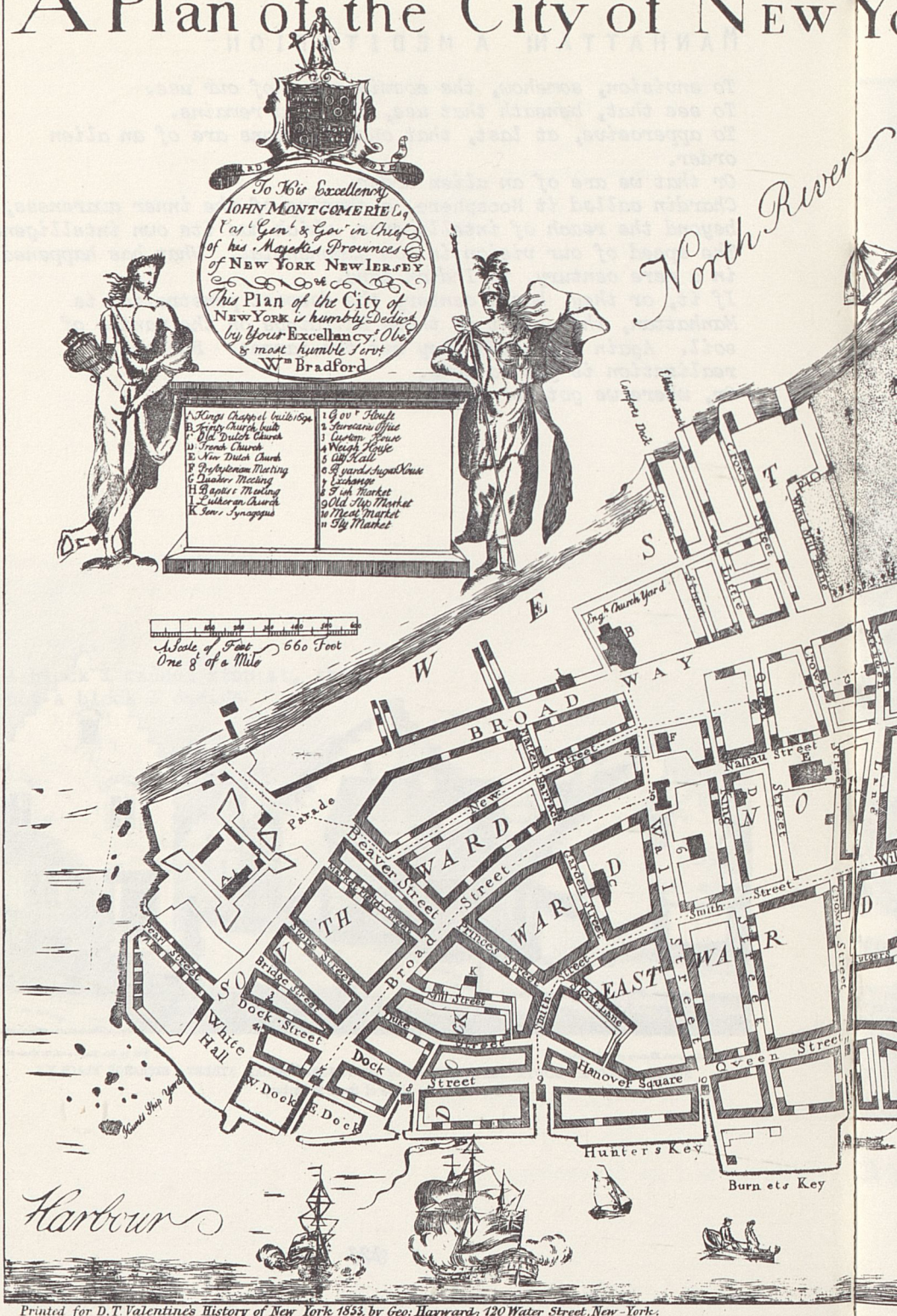
A Plan of the City of New Yo



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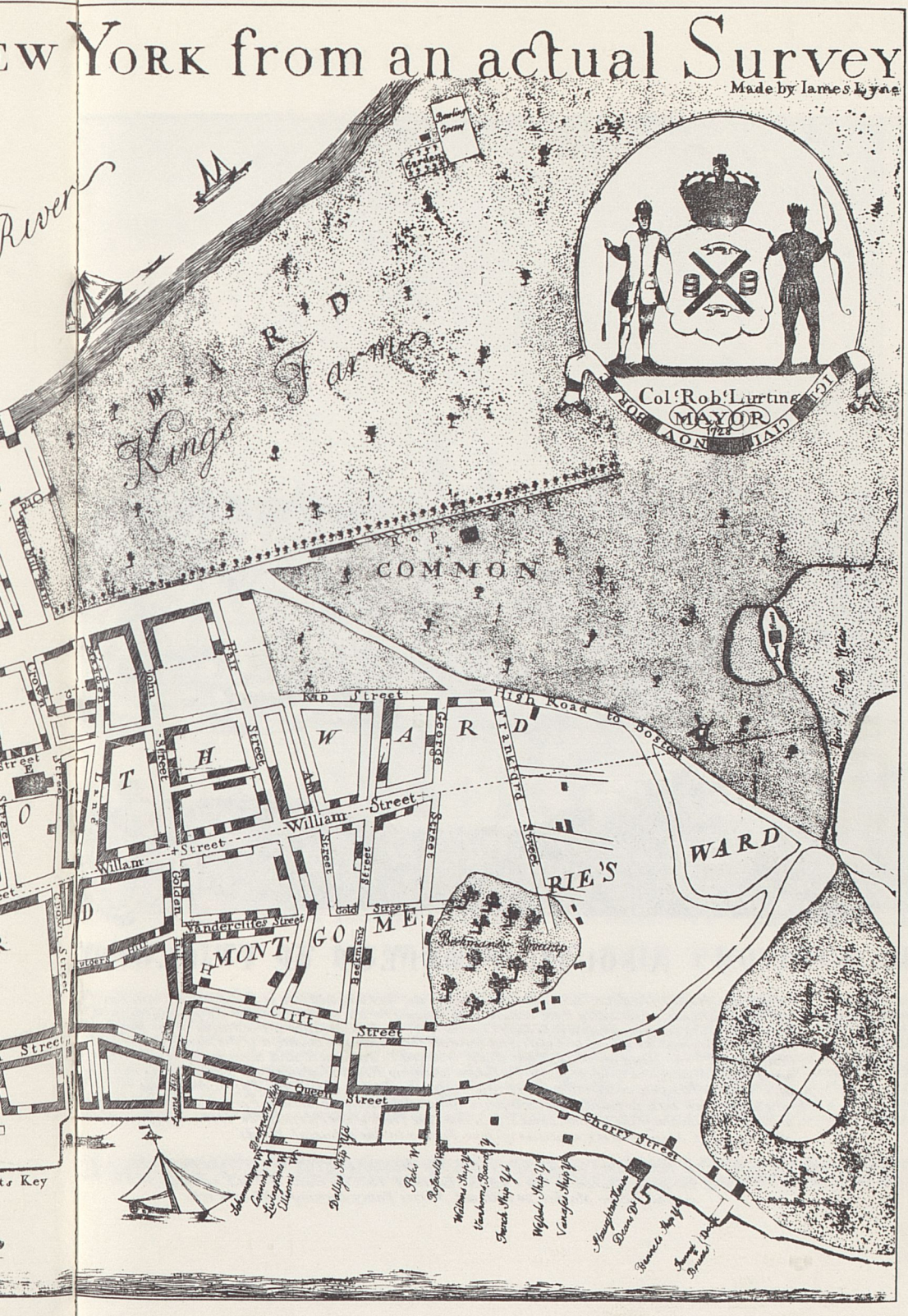

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Copied for D. T. Valentine

A SOUTH PROSPECT OF Y^E FLOURI

Captain Henry Hudson discovered this Country Ann° 1609, and sold it to y^e Hollanders & Letters Patent [illegible] *grante*
tion to King James, he permitted them to build some Cottages for the entertainment of Shipping that came [illegible] *later, u*
Proprietors, which being complain'd of by King Charles 1^st by his Embassador to the States at the Hague, they [illegible] *Publ*
they declare themselves willing to depart and leave all they had upon condition of the payment of £ 2500, [illegible] *the tro*
Charles y^e 2^nd who being informed of his Right, resolved to sieze on it, and accordingly it was recover'd [illegible] *s^t R*
name. His Majesty having conferrd by Patent upon his Royal Highness, all acquisitions made up [illegible] *Foreig*
in y^e year 1676 upon conclusion of y^e War with the Dutch they had Surinam made over to [illegible] *n by t*
y^e City of New York is builded upon a point of land & having a strong Fortification, y^e West p [illegible] *& is u*
under the Regulation of the English Laws & Customs. The Trade of the City in a few years is become almos [illegible] *uverse*
of Building of Ships & vast Quantities of fine Timber in the adjacent Woods

1 The Fort, 2 The Chappel in the Fort. 3 The Secretaries Office. 4 The Great Dock with a bridge [illegible] *r it. 5*
12 The Dutch Church. 13 The English Church. 14 The City Hall. 15 The Exchange. 16 The Fre [illegible] *Churc*
signed for the Market. 24 Collonel Morris' Fancy turning to Windward.

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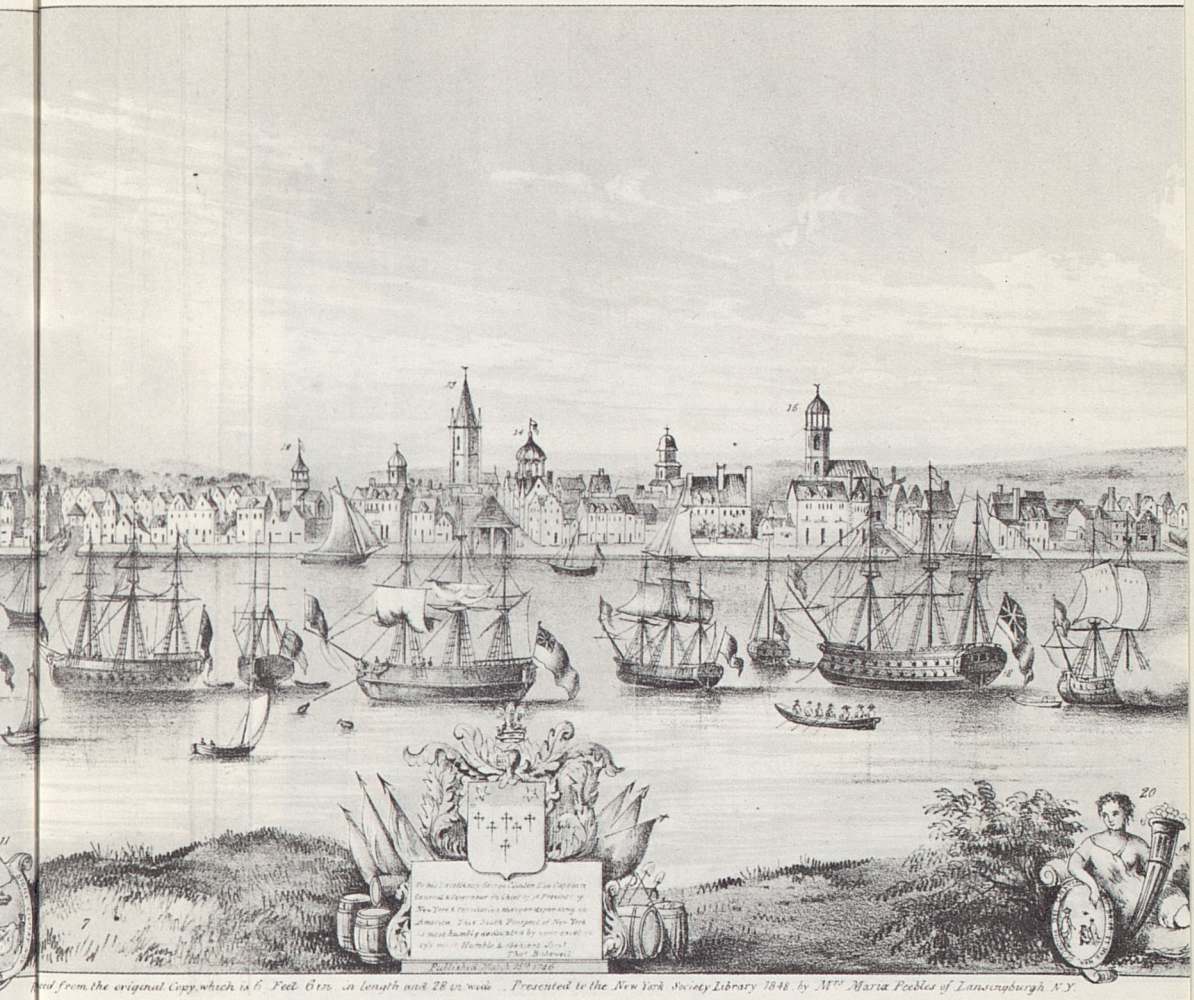

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RI[S]HING CITY OF NEW-YORK IN THE PROVINCE OF NEW

...tent h granted to some Merch[ts] by y[e] States a Colony was settled An[o] 1614 called New Netherlands, but S[r] Samuel Argal, Governour of Virginia, ga...
...me ...later, under which umbrage they build Towns and fortifie them, and upon expectation of a Governour from Amsterdam, they refuse to pay the...
...e, [th]ey Publick Instrument declared it was only a private undertaking of some Merch[ts] at Amsterdam. Then Comissions being granted by K...
...500 [t]he troubles in England soon after breaking out they receed from their first proposals and begin to strengthen themselves by all ...
...overn[t] S[r] Robert Car, those of the Inhabitants y[e] remained taking Oath of fidelity to the King of England the others have Liberty to ...
...le up Foreigners, His Royal Highness appointed Colonel Nichols, Governour who changd the Names of some of the Principal places, ...
...r to [r]n by the Treaty as an equivalent for New-York, the Province of New York is devided into parts, y[e] City one, then Albany, U...
...s[d] p[ar]t & is in y[e] Lat 41 40[m] N[o] 74 30[m] W[t] in a good Aer. The Province abounds with all neces[s]arys of Life & has a Governour, Counc...
...limat[e] universal, her Merchants having extended their Commerce to most parts of y[e] known World. The Harbour is safe for Ships of y[e] greatest ...

...ridge[t] 5 The Ruines of White Hall built by Governour Duncan 6 Part of Nutten Island. 7 Part of Long Island. 8 The Lower Market. 9 ...
...e Fre[e] Church. 17. Upper Market. 18. The Station Ship. A Wurf. 20 The Arms of the Province supported by Plenty. 21 Warf's for building ...

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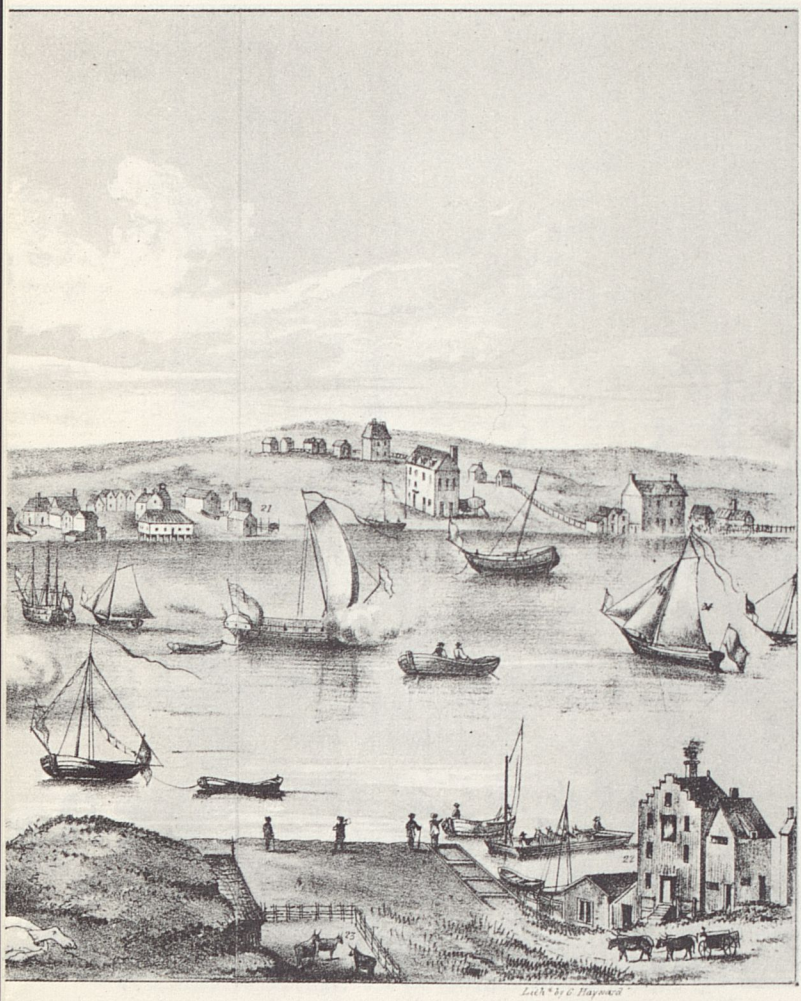

Lith.d by G. Hayward

YORK. NORTH AMERICA.

ve them disturbance, ere they were warrn in their Quarters, however upon applica-
accostomed Tribute & declare themselves, and the Merch.ts of Amsterdam sole
ing Charles, for setling Colony's to the Southward & to the Northward of them
possible means. This affairs steod till after y.e restoration of King
remove with all their Effects. Now begins New Netherland to loose its
and concluded a League between y.e Inhabitants & the Indians. And
ster. Dutches, Orange, Kings, Queens, Suffolk, Chester, and Richmond.
il, & General Assembly, The City hath a Mayor, Aldermen, & Sheriff & is
burthens & very secure lying 12 miles from y.e Sea having great convenience

The Crane 10. The Great Flesh Market 11. The City Arms supported by Peace.
Ships 22. The Ferry House to Long Island. 23. A Pen for Oxen & Cattel de-

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DUTCH COTTAGE IN NEW-YORK, 1679.

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NEW YORK FIRE ENGINE, 1733.

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